

THIRTY-SEVENTH ANNUAL REPORT

OF THE

DEPARTMENT OF MARINE AND FISHERIES

1904

FISHERIES

PRINTED BY ORDER OF PARLIAMENT



OTTAWA

PRINTED BY S. E. DAWSON, PRINTER TO THE KING'S MOST
EXCELLENT MAJESTY

1905

[No. 22—1905].

ANNUAL REPORT

DEPARTMENT OF AGRICULTURE

1904

FISHERIES

OFFICE OF THE SECRETARY



Printed by the Government Printing Office
Washington, D.C.

*To His Excellency the Right Honourable SIR ALBERT HENRY GEORGE, EARL GREY,
Viscount Howick, Baron Grey of Howick, a Baronet, G.C.M.G., &c., &c., &c.,
Governor General of Canada.*

MAY IT PLEASE YOUR EXCELLENCY:

I have the honour to submit herewith, for the information of Your Excellency and the Legislature of Canada, the Thirty-Seventh Annual Report of the Department of Marine and Fisheries, Fisheries Branch.

I have the honour to be,

Your Excellency's most obedient servant,

RAYMOND PRÉFONTAINE,

Minister of Marine and Fisheries.

DEPARTMENT OF MARINE AND FISHERIES,
OTTAWA, February, 1905.

ALPHABETICAL INDEX

TO THE

FISHERIES REPORT

1904

A

	PAGE
Animal life in Hudson Bay.....	xlvi
Antigonish County, N.S., Overseer's report and returns.....	41, 60
Anticosti Island, fishery returns.....	167
Areas—extent of water.....	xxiii
Armstrong, Wm., Hatchery officer, Newcastle, Ont.....	256

B

Bait Freezer system in Canada	xvi
Bait, cold storage of, by Peter Macfarlane.....	269
Black Bass, breeding and transportation of.....	xl, 230
Bay View lobster hatchery	243
Bedford hatchery, N.S.....	242
Behring Sea Question, remarks.	xlvi
" Sealing Fleet of 1903 and 1904.....	xlvi, 220
" Catch of Seals 1903 and 1904.....	xlvi, 224
Belliveau, A. H., Inspector's reports.....	xxxix, 150
Bensley, Dr. B. Arthur	xv
Bertram, A. C., Inspector of Cape Breton Island, report.....	35
Biological Marine Station, Richmond Bay, P.E.I.....	xiv
" Georgian Bay.....	xv
Bonaventure County, P.Q.....	145, 154
Bounties Fishing Regulations.....	10
" Statement of claims received and paid 1903.....	12
" General remarks.....	xix, 15
" Statement of claims received and paid since 1882.....	18
" Statement of all vessels receiving them, 1903.....	19 to 84
British Columbia, Reports on fisheries by Inspector C. B. Sword.....	xliii, 214
" Reports by Inspector J. T. Williams.....	xliv
" Reports on fish culture	350
" Seal catch in 1903 and in 1904.....	220, xlv
" List of Salmon canneries and pack for 1903 and pack of 1904.	218, xlii
" Statements of catch and fishing material	221, 223
" Visit of Hon. Minister Marine & Fisheries.....	xii
Bureau Fisheries Intelligence.....	xlvi
" Detailed report on, by M. Mackerrow.....	309
" Report on cod, herring, lobsters, mackerel, salmon, squid, &c... ..	310 to 355

C.

	PAGE
'Canada', D. G. Cruiser.....	303
Carmichael, Alex. G., report on hatchery (C.B.).....	244
Cape Breton Island. (See Nova Scotia District No. 1).....	37
" Fisheries officer's reports.....	35
" Fisheries Intelligence Bureau reports.....	331
Capital invested in the fisheries of Canada.....	xxvii
Catellier, L. N., report on fish culture.....	254
Caviare, its preparation, &c., by Prof. E. E. Prince.....	lxiii
Chapman, R. A., Inspector, N.B., reports.....	xxxvi, 102
Charlotte County, N.B., reports of overseers.....	98, 109
Coast—extent of Canadian coast line.....	xviii
Coarse fish—methods of extermination by Prof. E. E. Prince.....	lxxi
Cod, remarks on.....	128, 143, 148
Colchester County, N.S., Overseer's report.....	41, 58
Commissions, Fishery.....	xii
Cowie, J. J., Herring curer expert.....	lxxxiii
Cruisers, Canadian list of, stations.....	279
Culture of fish. (See 'F').	
Curlew', D. G. cruiser, (Capt. Pratt).....	299
Cunningham, F. H., Supt. of Hatcheries, report.....	233
Cumberland County, N.S.....	56

D.

Deseve, A. L., Hatchery officer at Magog.....	262
Digby County, returns..	82
Dogfish reduction works.....	xvii
Dogfish, remarks on.....	xvii, xxxv, xxxviii, 41, 97, 148, 335
Dunn, Capt. E. of Dominion cruiser 'Petrel'.....	298
Duncan, A. G., Inspector, Ont.....	xli

E.

Expenditure.....	xviii, 1
" Subdivision by provinces.....	2
" Fish culture.....	3
" Fisheries Protection Service.....	5
" Comparative statement.....	8
Export of fish from Canada.....	xxii

F.

Fish culture.....	xv
" Report on, by Prof. E. E. Prince, for 1904.....	225
" " F. H. Cunningham, Supt.....	233
" Lobster pounds.....	231
" Re New hatcheries.....	225, 233, 240
" Reports of officers in charge of hatcheries.....	235 to 264
" List " " " ".....	xxxiii
" Hatcheries in Nova Scotia.....	230, 242, 245
" " New Brunswick.....	229, 246, 249
" " Quebec.....	229, 253
" " Ontario.....	229, 256
" " Manitoba.....	230, 260
" " British Columbia.....	230, 235, 237, 240
" Expenditure.....	3
" Oysters cultivation. (See letter 'O').	

SESSIONAL PAPER No. 22

F—Concluded.

	PAGE
Fisheries Protection Service.....	xlvi
" Report on, by Commander O. G. V. Spain.....	279
" Cruisers, their captains and stations.....	279
" Expenditure.....	5
Fishways.....	153, 188
Fisheries Protection Service <i>Modus Vivendi</i> licenses.....	280
" List of U.S. fishing vessels entering Canadian Ports.....	284
" Reports from captains of cruisers.....	289
Fishery officers, staff.....	xxxix
" Intelligence Bureau. (See letter 'B').	
" Bounties. (See letter 'B').	
" Statistical statements. (See letter 'S').	
" Season of 1904, remarks on.....	xxxiv
Ford, L. S., Inspector, report.....	xxxiv, 44
Fraser River, B.C., hatcheries.....	235
Fry, Distribution of.....	228
" Recapitulation since 1873.....	229
Fundy Bay, fisheries.....	96, 109

G.

Gaspé Hatchery.....	253
" County, P.Q.....	145, 158
Georgian Bay Biological Station.....	xv
Gloucester County, N.B., returns.....	116
Gourdeau, F., Lt.-Col., Deputy Minister's Report.....	xi
Grand Manan fisheries.....	100
Graham, John, Captain of the 'Osprey'.....	289
Granite Creek Hatchery.....	237
Guysborough County, N.S.....	42, 64

H.

Halket, Andrew, Naturalist, report.....	xlvi
Halifax County, N.S., reports.....	42, 68
Harrison, H. E., Fishery Inspector.....	xxxvi, 104
Harrison Lake Hatchery, B.C.....	239
Hatcheries, new.....	225, 240
" Report on. (See also Fish culture).	
Herring, improvement in curing by J. J. Cowie.....	xii-lxxxiii
" Commission.....	xii
" remarks on.....	44, 97, 145, 216
Hockin, R., Inspector's reports.....	xxxiv, 40
Hurley, J. M., Inspector's report.....	xl
Hudson Bay Expedition (animal life).....	xlvi

I.

Intelligence Bureau. (See letter 'B')	
Inspectors of Fisheries, list of.....	xxxii
" " Report from. (See each Province).....	
Inverness County, N.S., returns.....	39, 52

K.

Kemp, Ernest. oyster expert's report.....	265
Kent County, N.B., returns.....	116
Kent, Capt. W. H., cruiser 'Kingfisher', report.....	290
'Kingfisher', D. G., cruiser.....	290
Knowlton, C. T., Capt. of the 'Canada'.....	303
'Kestrel', D. G. cruiser B.C.....	299

L

"La Canadienne" D. G. cruiser.....	306
Lavoie, N., Dr., inspector, report.....	147
La Have, N.S., fishing fleet.....	318
Lake Superior.....	190
" Huron.....	192
" Erie.....	194
" Ontario.....	196
" of the Woods.....	190
LeBlanc, Nap. S., Hatchery officer.....	252
Lindsay, Robt., Hatchery officer, Gaspé.....	253
Lobsters, remarks on.....	41, 127, 149
" hatcheries, N.S. and N.B..	243, 252, 263
Lobster pounds.....	231
Lunenburg, fishing fleet.....	318
" County, returns.....	74

M

Magog Hatchery.....	262
Marine Biological Station report.....	xiv
Magdalen Islands.....	146, 160
May, Capt. Geo. M., of the "Constance".....	296
Mackerel, remarks on.....	44, 144
Manitoba Lake.....	202
Manitoba, report and statistics of Fisheries by Inspt. W. S. Young.....	201, 204
Margaree Hatchery, C.B.....	244
Matheson, J. A., Inspt. P.E.I., report.....	xxxvii, 127
Miller, E. W., Inspector, N.W.T., reports.....	xlii, 206
Miramichi Hatchery, N.B., report.....	247
Mowat, Alex., Hatchery officer at Restigouche.....	249
Moisie and Mingan divisions.....	146
McCluskey, Chas., Hatchery officer, report.....	246
Mackerrow, A. D., Intelligence Bureau.....	309
McPherson, A. J., Overseer, Lake Winnipegosis.....	202
Macfarlane, Peter., Report on the bait cold storage.....	269

N

New Brunswick, Report on District No. 1, by Insp. J. H. Pratt.....	96
" " " 2 " R. A. Chapman.....	102
" " " 3 " H. E. Harrison.....	104
" Synopsis of Fishery Overseers' reports.....	98, 106
" Statistics of Fisheries District No. 1.....	109
" " " " 2.....	114
" " " " 3.....	121
" Recapitulation of Yield and Value of Fish.....	125
" " Fishing Materials.....	126
" List of Vessels receiving bounties.....	29
" Movements of Fish, Intelligence Bureau.....	346
Newcombe H. Capt. B.C. cruiser.....	299
Newcastle, Ont., Hatchery, report.....	256
Nimpkish Hatchery, B.C.....	240
N W. Territories, Report by Inspectors E. W. Miller and H.S. Young.....	xlii, 206
" Statistics of Fishery, &c.....	212, 213
North Shore Division, P. Q., reports.....	146
Northumberland County, N.B., returns.....	116
Nova Scotia, Report District No. 1, A. C. Bertram.....	35
" " " 2. R. Hockin.....	40
" " " 3. L. S. Ford.....	44

SESSIONAL PAPER No. 22

N—*Concluded.*

	PAGE.
Nova Scotia, Synopses of Officers' reports	37, 41
" Statistics of Fisheries Districts Nos. 1, 2, 3.....	46, 56, 74
" Recapitulations, Yield and Material.....	90, 94, 95
" List of Vessels receiving bounties.....	19
" Intelligence Bureau reports	310

O.

Ontario, remarks on fisheries.....	186
" statistics of Fisheries	190
" statement of fishing materials	200
Overseer's reports. (<i>See</i> each province and district).	
Oyster Culture, by Mr. E. Kemp.....	265
" remarks on.....	xvi
Ogden, Alfred, Hatchery officer, N.S.....	242
' Osprey ' Dominion cruiser.....	289
Ottawa Hatchery.....	259
' Ostrea ' (Dom. Steamer for oyster culture).....	265

P.

Parker, Wm., hatchery officer, Sandwich, Ont	257
Pelagic sealing.....	xlvi
' Petrel, ' Dom. cruiser in Ontario.....	298
Pictou County, N.S., reports.....	62
Prince Edward Island, Report on fisheries, Inspector J. A. Matheson.....	xxxvii, 127
" Statistics of Fisheries.....	129, 140
" Fishing Material.....	138, 141
" Intelligence Bureau reports.....	309
Prince, Prof. E. E., Commissioner, report on Fish Culture.....	225
" Marine Biology.....	xiv
" Special articles on :—1. The sturgeon industry of Canada.	liii
2. Methods of coarse fish extermination	lxxi
Pratt, Capt. J. H., Inspector, N.B., reports.....	xxxv, 96, 292, 304
Protection Service (<i>See</i> letter ' F. ')	279

Q.

Quebec, Reports on the Gulf St. Lawrence, by Dr. Wm. Wakeham	xxxvii, 142
" South Shore, by Dr. N. Lavoie.....	147
" Inland Divisions, by A. H. Belliveau and Jos. Riendeau.	150, xxxviii, xxxix
" Synopses of overseers' reports.....	145
" Statistics of Fisheries for Gulf Division.....	154
" Inland Divisions.....	180
" Recapitulation of yield of fisheries.....	184
" Fishing Materials.....	185
" Intelligence Bureau reports	349

R.

Revenue, statement of.....	7
" Comparative statement of.....	xi, 9
Report of Deputy Minister.....	xi
Report of Inspectors. (<i>See</i> also each province).	
Restigouche hatchery.....	249
" County returns.....	116
Richmond County returns.....	37, 46
" Bay, P.E.I.....	266
Riendeau, Joseph, Inspector's report.....	xxxviii
Robinson, Thos., Hatchery officer.....	239

S.

	PAGE.
St. John River, District, N.B.....	106, 120
" Hatchery, N.B.....	246
Sandwich Hatchery.....	257
Salmon, remarks on.....	102, 104
Seals, Behring, Sea remarks.....	xlvi
Selkirk Hatchery, Manitoba.....	260
Shad, remarks on.....	40, 105
Sheasgreen, Isaac, officer Miramichi Hatchery.....	247
Shelburne County returns.....	78
Sword, C.B., Inspector of B.C., reports.....	xliii, 214, 235 to 240
Sheppard, O. B., Inspector, Ont.....	xli
Shemoguee Lobster Hatchery.....	252
Skeena River Hatchery, B.C.....	238
Spain, O. G. V., Commanding Marine Service of Canada.....	279
Staff, Outside officers.....	xxxi
Statistics of Fisheries (<i>See</i> each province).	
Statements recapitulating the value of fish since 1870.....	xxvi
" " Fishing gear.....	xxviii
" " Number of fishermen.....	xxxi
" the catch of fish in detail. (<i>See</i> each province).....	xxiv
Storage of Bait frozen.....	269
Sturgeon and Caviare, by Prof. E. E. Prince.....	lii
Scottish methods of curing herring, by Jno. J. Cowie.....	lxxxiii

T.

Tadoussac Hatchery report.....	254
'Thirty Three.' Steam herring drifter.....	xiii, 311
Tobique River, <i>re</i> its salmon.....	107

U.

United States, list of fishing vessels calling at our ports.....	284
" " <i>Modus Vivendi</i> licenses.....	280

V.

Value of Fisheries. (<i>See</i> also each province.....	xix
Victoria County, N.S.....	38, 50

W.

Walker, John, Hatchery officer, report.....	259
Wakeham, Wm., M.D., reports.....	xxxvii, 142, 306
Westmorland County, N.B., returns.....	116
Winnipegosis Lake.....	202, 204
Williams, J. T., Insp. of Fisheries Northern B. C.....	xliv, 301

Y.

Yarmouth County returns.....	80
Young, Wm. S., Inspector, Manitoba.....	xli, 201, 260
Young, Harrison S., Inspector, N.W.T.....	xliii, 209

REPORT

OF THE

DEPUTY MINISTER.

To the Honourable
RAYMOND PRÉFONTAINE,
Minister of Marine and Fisheries.

SIR,—I have the honour to submit the thirty-seventh annual Fisheries Report of this department for the fiscal year ending on June 30th last. The usual statements of expenditure and revenue as well as the reports from the various district Inspectors of Fisheries are given, and there are also included reports on fish culture in the Dominion, oyster culture, the improvement of cured herring in Canada, bait cold storage, fishery protection service, fisheries intelligence bureau, &c. A *résumé* of the fishing bounty claims follows and more or less detailed summaries of the work done at the Marine Biological station, located for the season on the coast of Prince Edward Island, and the Lake Biological station, Georgian bay, Ontario. Appended to this report are two special reports by Professor E. E. Prince, Commissioner of Fisheries for the Dominion, the subjects treated being 'The Sturgeon Industry of Canada,' and 'Methods of Coarse Fish Extermination,' and in addition Mr. J. J. Cowie's report on the Herring Curing Experiment in eastern Nova Scotia.

The appendices referred to above, follow in order :—

1. Expenditure and Revenue.
2. Fishing Bounties.
3. Nova Scotia Fisheries.
4. New Brunswick Fisheries.
5. Prince Edward Island Fisheries.
6. Quebec Fisheries.
7. Ontario “
8. Manitoba “
9. North-west Territories Fisheries.
10. British Columbia Fisheries.
11. Fish Culture Operations, 1904.
12. Bait Cold Storage, 1904.
13. Fisheries Protection Service and Intelligence Bureau, 1904.

VISIT OF MINISTER TO BRITISH COLUMBIA.

In view of the diverse opinions held, in regard to all the most important aspects of the Great Pacific fisheries of the Dominion, the Honourable the Minister paid a visit to British Columbia for the express purpose of personally meeting the various parties interested. Most interesting trips were made to certain fishing localities and great industrial centres, and those representing the different fishing and other interests in Victoria, Vancouver, New Westminster, &c., had the opportunity of fully stating their case and discussing the problems awaiting solution. Apart from the stupendous salmon canning industry, with all the associated questions of conjoint United States and Canadian protection, the use of trap-nets, the rapidly developing herring industry, the deep sea fisheries for halibut, &c., all came in for attention, and at the conclusion of his visit the Honourable the Minister was strongly impressed with the necessity for a British Columbia Fisheries Commission having all the requisite powers for fully investigating the fisheries as a whole, and taking evidence, visiting the fishing grounds, and making an exhaustive survey of the whole subject. The Commission would possibly include in its work a mutual conference with a United States Commission in the State of Washington.

FISHERIES COMMISSION, 1903-1904.

Reference was made in last year's report to the constitution of this Commission, and to the sittings held up to the close of the year 1903. The further sittings in Southern New Brunswick, were held during the present year, and, after the whole of the evidence had been put into proper shape, meetings of the Commission were held in Ottawa, in November, and progress was made with the report and recommendations; but further meetings will be held at a convenient date before the findings of the Commissioners can be put in final form.

GLOUCESTER CO., N.B., FISHERY COMMISSION, 1904.

A commission of inquiry was appointed to investigate certain grievances and allegations on the part of cod fishermen, salmon fishermen and anglers in Gloucester county, from the mouth of the Restigouche river to Point Miscou. Professor Prince, Dominion Commissioner of Fisheries, Ottawa, and Mr. Peter Morais, of Caraquet, N.B., composed the commission and from the 15th to the 20th of April held sittings, took a large amount of evidence from fishermen and others resident on the shores from Charlo to Shippegan and Miscou Islands. The dog-fish nuisance, the observance of the Sunday close time, especially near Bathurst, by the taking up of the salmon nets, and cognate matters were fully investigated, and a report and recommendations drawn up and presented last April. As many of the questions raised at the sittings of this commission are embraced within the limits of the Dog-fish Reduction Works Scheme, and in the larger Fisheries Commission, referred to above, no special legislative steps followed the commission's recommendations.

IMPROVEMENT OF CANADIAN CURED HERRING.

The scheme outlined in the former report was carried out as far as possible during the past season. The most important fact of all established by the experiments in

SESSIONAL PAPER No. 22.

fishing and packing herring with the Scottish staff is, that the schools of herring in our Atlantic waters if properly handled, cleaned, cured and barrelled, are equal if not superior to the Norwegian, Scotch and Dutch herring, which have such high repute in the markets of the world.

A special steam herring drifter, No. 33, was brought out and a staff of nine fishermen (two of them Nova Scotia men) seven from Scotland and six girls, under the supervision of Mr. John J. Cowie, of Lossiemouth, Scotland, commenced operations at Canso, N.S., on June 3. The work was aided very greatly by the well-known firm of Messrs. A. N. Whitman & Sons, who spared no effort to facilitate the carrying out of the scheme authorized by the Hon. the Minister. As appears from Mr. Cowie's report, which forms No. III of the special appended reports, the herring supply was seriously disappointing, and much time was spent in finding the grounds resorted to by our Atlantic herring. The offshore feeding and spawning grounds do not appear to be very accurately known to our fishermen, and the Drifter was occupied largely in exploring for the herring schools. As a consequence the total pack of herring fell far below expectations and the actual number of barrels marketed was very disappointing both to the department and to Mr. Cowie and his staff. As Mr. Cowie reports, the barrels of herring, shipped to New York, Halifax, N.S., and St. Petersburg, were reported by the merchants and experts to be of the very finest quality. 'We are agreeably surprised at the quality and condition' said one of the best-known New York buyers. The Russian merchant declared them 'much like Downings bays, which are the very best quality of herring sold in the St. Petersburg market.' In order that no time may be lost during the coming season and the earliest runs of herring netted, which were missed last year, the minister decided to purchase the steam drifter, and when the staff are ready in April next to commence work there will be no repetition of last year's delay on account of the absence of the steam fishing vessel with its outfit of nets and gear. Had fishing begun as soon as the earliest herring appear it is possible that the quantity estimated, viz.: about a thousand barrels could have been cured and shipped to the various markets, whereas only a little over one-twentieth of that quantity was actually handled, some being disposed of as bait to local fishermen as a small portion of the fish were unsuitable for curing, while half a barrel was smoked and made into Scotch kippers and were pronounced to be of excellent quality. As Mr. Cowie gives the full details in his report it remains only to say that the 11 half-barrels sold in New York, and the 22 half-barrels sent to St. Petersburg were found by the foreign buyers to be of the finest quality, and were much superior to the pickled herring hitherto put up and shipped by Canadian herring curers.

There is a practically unlimited demand for pickled herring of the standard of the best European cured fish. The United States markets cannot obtain more than a fraction of these herring which are required, while Russia, Germany, and many other European countries, not to mention the colonies, Australia, New Zealand, the Straits Settlements, &c., besides our own increasing Canadian needs, all afford a field for the development of a most desirable and remunerative trade. From Stettin, Dantzic, Königsberg, and other continental centres, inquiries have already come, and if, in the ensuing season a more extended experiment can be carried out with anything like adequate success, our fishing population will have a stimulus to equal or rival the Scottish curers, which has hitherto been apparently wanting.

If, as Mr. Cowie recommends, the experimental herring fishing and curing be extended to the shores of the Bay des Chaleurs and the Bay of Fundy, as well as western Nova Scotia, and if a trial can also be made in British Columbia, where the herring cured on Vancouver Island and marketed, have created a considerable demand already : but by the adoption of superior Scottish methods would bring greatly enhanced prices and a more active demand, the measures sanctioned by the Hon. Mr. Préfontaine, as was said in my report last year, 'will effect nothing short of a revolution in the herring industry of Canada.' The words of the London (England) Fish Trades Gazette may be here justifiably repeated :—

'Our Canadian friends in the herring trade are bestirring themselves, or it would be more correct to say that they are getting stirred up a bit, in order that they may attend better to their own interests. The Dominion Minister of Marine and Fisheries, Mr. Préfontaine, has the opinion that Canadian herring do not command the price and favour they would do were more attention paid to the curing and packing by those interested with this important part of the business. It is authoritatively stated that the Canadian herring are quite as good as those taken in the Scottish waters, but the fact is familiar with every one with a knowledge of the market, that the latter can command from 50 to 100 per cent more money in Canada than those caught by our Colonial cousins. That the attention paid to packing and the careful system of cure by the Scottish herring merchants has much to do with the difference in price, there can be no question.' Mr. Préfontaine is going the right way about the business. The plan he has chosen is that recommended by Professor Prince, Dominion Commissioner of Fisheries, upon whose report the experiment was organized and has been carried out.

'Scotch fishermen and others practical in the catching and curing of herring taken over to Canada will, after the preliminary tests are completed initiate the local fisher-folks in the best way of preparing the fish for market in much the same way as the Scotchmen are employed in Ireland by the Congested Districts Board. There is abundant evidence that the fishing population has awakened to the importance of this scheme. They realize that the herring fisheries of the Dominion have yielded them not more than a fraction of the wealth that will come into their hands by the adoption of the improved methods of handling and curing the herring, which the Honourable Mr. Préfontaine is anxious of seeing adopted generally by our Canadian fishermen.'

MARINE BIOLOGICAL STATION.

In accordance with the rule, adopted by the Board of Management since the station commenced its important work, a second season was spent at the location chosen, viz : Malpeque, Prince Edward Island, where the staff had carried on fishery researches during the preceding season (1903). Professor Ramsay Wright, the Assistant Director, in the enforced absence of the Director, (Professor Prince), again had the responsible task of supervision, and upon him fell the duty of carrying out the scheme of work, outlined by the Board at their meeting in Ottawa on March 26, 1904. The famous Richmond Bay oyster grounds, including the valuable Curtain Island beds, formed the main field of research, and some valuable work in the investigation of the spawning, life history, and habits of the oyster, was carried out. Some very striking results were accomplished in those lines of study : but

SESSIONAL PAPER No. 22

not less in the tests made of various methods of oyster cultivation. Quite a number of new methods of laying the oysters and of working oyster areas were practically tested, and Professor Wright's report will be of the highest value when it is published at an early date. The breeding peculiarities and embryology of the oyster are being dealt with in a detailed report by Dr. Joseph Stafford. In addition to these two important reports, which will point out feasible methods of increasing the productiveness and value of our maritime oyster beds, the forthcoming report of the station will include papers by Professor R. R. Wright, 'on the Plankton of Eastern N. S. Waters'; by Professor A. P. Knight, on 'the Effects of Dynamite Explosions on Fish-life'; by Dr. Joseph Stafford, on the 'Invertebrate Fauna of Canso, &c.'; by Professor E. E. Prince 'The early life-history of the Gaspereau'; by Professor Knight 'Further Report upon Sawdust and Fish-Life'; by Professor Fowler, on 'The Flora of Canso' and by Dr. Mackay, Mr. Cornish, Mr. C. B. Robinson, and Dr. Stafford, upon Canso fishes, Fish Parasites, Marine Polyzoa, Canso seaweeds and Plant-life, and the Diatoms of Canso Harbour, in addition to the valuable oyster reports already mentioned.

The work of the Station was aided to an extent not to be exaggerated, by the department's oyster steamer *Ostrea*, under the experienced command of Captain E. Kemp.

The question of a new location for the Marine Biological Station will be discussed at a meeting of the Board to be held early in the New Year, and a programme of further fishery investigation will be drawn up.

GEORGIAN BAY STATION, ONT.

This, the only fisheries research station upon the vast inland waters of Canada, continued its work at Go-Home Bay, Parry Sound, under the supervision of Dr. B. Arthur Bensley, Toronto University. The breeding habits of a number of valuable fishes, such as the doré or pickerel, the black bass, &c., formed the subject of further researches, and additions were made the whole season to the fine collection of fish specimens, examples of fish food, &c., which has now assumed extensive dimensions. In order to bring the work more into touch with the fisheries investigations carried on under the Board of the Marine Biological Station, the Georgian Bay Station has now been placed under the control of that Board at the request of the Committee (of which Principal Burwash, of Victoria University, Toronto, was President) which had managed it since it commenced work four years ago. During the coming season it is intended to make arrangements for a more systematic examination of the spawning grounds of valuable commercial fishes in the lakes, in view of the dissatisfaction existing as to the appropriateness, or otherwise, of the present close seasons defined in the Dominion Fishery Regulations. The experiments, carried on for two seasons, will be continued in order to frame some scheme for the improvement of the supply of black bass in Georgian Bay waters, while a series of other investigations is being arranged all bearing more or less directly upon the economic fishery resources of the great lakes.

FISH-BREEDING OPERATIONS.

The details of the Fish-breeding work in the hatcheries operated by the department will be found in the report of the Dominion Commissioner of Fisheries together

4-5 EDWARD VII., A. 1905

with the report of the Superintendent of Fish-Culture and the officers in charge of the fish-breeding institutions, forming Appendix No. 11 of this report.

Professor Prince points out that twenty-two hatcheries are now devoted to artificial fish-incubation and that no less than 473,258,000 young fry were planted in the marine and fresh water areas of the Dominion.

In addition to this, the usual work of fish-breeding, certain special lines of fish propagation have been carried out. A pond at Gabarus, Cape Breton was used for impounding parent seed-lobsters under an arrangement with Mr. H. E. Baker, a well known lobster canner. Over 56,000 large lobsters carrying eggs, and in reality destined to be canned, were secured by purchase during the open fishing season, and after being impounded until the close season began, were then liberated in the Atlantic waters, where they hatched out their young in the ordinary natural way. This scheme should in a very few seasons be effective in enormously benefiting the waters off Cape Breton, where the supply, as on most other portions of the coast of Canada, of that valuable crustacean has been considerably depleted.

Black bass were also hatched and reared in the department's ponds, Bay of Quinte, and this fall for the first time a supply of land-locked salmon eggs was obtained in the well-known St. Croix lake system of New Brunswick.

OYSTER CULTURE.

The history of the oyster fishery in the Dominion has been already dealt with in detail in previous reports of this department, and received very full and elaborate treatment in Mr. Ernest Kemp's report entitled 'The Oyster Fishery of Canada and Oyster Culture' published as Appendix No. 11 in the department's (Fisheries) report, 1898. (Page 259.)

The particulars of the work done on the various oyster beds under the direction of the department's oyster expert (Mr. Kemp) are given in the usual report forming part of Appendix No. 11 of this report. In addition to the operations carried on at Annapolis Basin, N.S., Murray Harbour, Richmond Bay, Prince Edward Island and other localities. Mr. Kemp, under instructions from the department, rendered valuable assistance to Professor Ramsay Wright, and the staff of the Marine Biological Station with the oyster steamer *Ostrea*. The special researches and oyster culture experiments carried on upon the famous Malpeque beds, near which the station was located during the past season, were materially aided by the experienced practical help of Mr. Kemp, and the *Ostrea* in addition did some valuable dredging and surveying work.

During the coming year the operations carried on in northern New Brunswick will require to be continued and carried to completion, while the Prince Edward Island, and Nova Scotia areas will demand urgent attention in order that adequate results in the improvement and productiveness of the beds can be secured.

BAIT FREEZERS.

Mr. Peter Macfarlane's report, which forms Appendix No. 12, gives the particulars of the work carried on under the Government Cold Storage Scheme. Up to the end of December, 1902, the total number of fishermen's bait freezers was 20, but at the

SESSIONAL PAPER No. 22

end of this year (1904), there are no less than 29 of these institutions, while two new ones are actually in process of construction and proposals for three or four more are under consideration.

It is not to be expected that the full advantages offered by these local bait freezers will be seen until the scheme has been in operation for some years, but already in many localities the fishing population regard the facilities afforded for the storage of bait in the government aided cold storage establishments as of vital importance.

Of course the needs of the great deep sea fishing fleets cannot be met by these small freezers. It was not expected that they would. Hence the building of freezers of large capacity, under the government cold storage system was foreseen, and during the past year the first steps have been taken for the erection of a bait freezer of large capacity at Canso, N.S., one of the principal centres resorted to by the 'bankers' and vessels of the great fishing fleets. This large freezer will be ready for operation early in 1905, and if it realizes anticipations, it will probably be the precursor of a series of bait cold storage institutions, at important fishing centres in the maritime provinces.

The four small bait freezers constructed during the year, viz. : at LaHave, N.S., St. Peters, C.B., Half Island Cove N.S., and Capelin, P.Q., are all at well-known fishing centres, and will furnish supplies of frozen bait, at times when fresh bait is scarce or unobtainable, which will be of the utmost value to the fishermen. The two new freezers, not yet completed, are at Lockeport N.S., and Anse à la Barbe P.Q. Of the total number of freezers built under the departmental scheme, six, it may be added, were practically not operated this season for various local reasons to which reference is made in Mr. Macfarlane's report.

DOG-FISH REDUCTION WORKS.

Opinions as to the best method of dealing with the dog-fish nuisance upon the Atlantic coast appeared to be so diverse that much difficulty arose in deciding how best the government could aid in abating the plague. Professor Prince treated the whole subject in a special report last year, and summarized the many schemes, which had been urged upon the department's attention.

The Fishery Commission in Gloucester county, N.B., which specially inquired into the matter along the south shore of the Bay des Chaleurs found that the fishermen generally favoured a government bounty and the commissioners, in consequence recommended the payment of an adequate bounty to encourage the fishermen to exterminate the dog-fish. The Commissioner of Fisheries himself favoured departmental action through its officers as the most direct method of coping with the evil, as it appeared that a large bounty could not be offered and the fishermen could not be expected to forsake their ordinary remunerative occupations, and sufficiently exert themselves to capture the schools of dog-fish. A further scheme was the organization of reduction works at the certain central points, where valuable products could be manufactured from fish waste, dog-fish, &c. The manufacture of oil and fertilizers from dog-fish, fish offal, &c., it was claimed would make possible adequate payment to the fishermen for the dog-fish captured and the fish offal brought to the reduction works, and the extensive and rapid destruction of the schools of dog-fish would be actively stimulated.

Hence a large building is being erected at Canso as the first of these government-aided reduction works, and the plant manufactured by the American Process Company

4-5 EDWARD VII., A. 1905

of New York, is being installed so that the utilization of dog-fish and fish offal will be carried out next season.

Two other plants have been obtained by the government, and reduction works will be erected this year at some point north of Canso and at some point in Western Nova Scotia. They will probably be run under departmental auspices unless it appears more advantageous to have them operated under some mutual arrangement between the department and the local fishing firms. Whatever will most rapidly and effectively secure the extermination of the dog-fish and their conversion into marketable products will, it need hardly be said, meet the general approval of the fishing population, who have suffered such serious losses, in recent seasons, from the dog-fish plague.

Their use as food has long been recognized in Norway, the Channel islands and in the Hebrides and northern islands of Scotland and, indeed, in Aberdeen, Scotland, dog-fish prepared in various more or less appetizing ways, have found a ready market, and some such scheme is being tried by several parties in the maritime provinces. Recently three or four enterprising lobster packers in Prince county, P.E. Island, Cape-Breton and Richmond counties, C.B. and in Shelburne and Digby counties, Western Nova Scotia, have most successfully put up canned dog-fish, which have been pronounced in that preserved form as 'superior to salmon.'

In most markets a prejudice exists against dog-fish and all such members of the shark tribe, especially amongst our own population who have such a superabundance of the most excellent kinds of food fishes available in the lakes, rivers and seas of the Dominion. No means, however, of creating a demand for dog-fish products should be neglected in view of the fact, that unless extensive measures be taken, and the wholesale extermination of dog-fish stimulated, this greatest and worst enemy of the fishermen may continue to inflict loss and destruction along our Atlantic shores.

GENERAL STATISTICS *re* FISHERIES.

Extent of Coast.

The fisheries of Canada are the most extensive in the world, extending our immense sea-coast line, besides innumerable lakes and rivers. The eastern sea-coast of the maritime provinces from the Bay of Fundy to the Strait of Belle Isle covers a distance of 5,600 miles, while the western sea-coast of British Columbia is reckoned at 7,180 miles, which is more than double that of Great Britain and Ireland.

While the salt water inshore area, not including minor indentations, covers more than fifteen hundred square miles, the fresh water area of that part of the great lakes belonging to Canada is computed at 72,700 square miles not including the numerous lakes in Manitoba and the North-west Territories, all stocked with excellent species of food fish.

Fisheries Expenditure and Revenue.

The statements of the total expenditure for the different services connected with the Fisheries of Canada during the last fiscal year, amounting to \$634,824, form the first appendix of this report. This amount comprises the fisheries proper \$105,111; fish culture, \$109,286, fisheries protection service, \$204,654; miscellaneous expenses, \$56,828, including also \$158,943 distributed as fishing bounties.

SESSIONAL PAPER No. 22

The net total amount received as revenue from fishery licenses, fines, &c., during the same period in the different provinces is given at \$95,756. This sum also includes the *modus vivendi* licenses granted to the United States fishing vessels, \$10,165.

A comparative statement of all fisheries expenditure and revenue for the last fourteen years concludes this appendix.

Full details of these different expenditure may be found in the Auditor General's report under their different headings.

Fishing Bounties.

The deep sea fishermen of the maritime provinces, received the sum of \$158,943 as bounties on their respective catches of fish for the season of 1903. The owners and crews of the 851 fishing schooners received \$72,936, or nearly half of the amount : showing that fifty-six more vessels than in 1902, participated in this bounty. On the other hand, 600 boats less than in the previous year shared in this distribution of \$86,007, amongst 19,149 boat fishermen. Altogether 12,178 claims were paid, thirty-nine having been rejected and refused payment as being fraudulent.

By provinces, Nova Scotia received by far the largest amount of the bounty, viz. : about \$100,000. While Quebec drew \$34,700, New Brunswick only secured \$14,872 and P. E. Island received less than ten thousand dollars for its share.

Since its inception (1882) the sum of \$3,474,910 has been thus distributed amongst the fishermen of the above mentioned provinces to better enable them to prosecute their calling.

Further details respecting the payment of the said bounties as well as the regulation governing their distribution will be found in appendix No. 2 of this report.

VALUE OF THE CANADIAN FISHERIES.

The total value of fish caught and fish products prepared in Canada during the year 1903 aggregates \$23,101,878.

With one exception, in 1901, when the phenomenal catch of salmon in British Columbia swelled the total value beyond twenty-five million dollars, this is the largest aggregate on record. It exceeds the amount of the previous year by over a million dollars.

This result has been achieved without any abnormal yields in any of the provinces, and this increase seems to have been almost general to all parts of the Dominion.

4-5 EDWARD VII., A. 1905

THE following table shows the values of fish by provinces as compared with that of the previous year.

Province.	Value of all Fish.	Increase.	Decrease.
	\$	\$	\$
Nova Scotia.....	7,841,602	489,849	
British Columbia.....	4,748,365	.....	536,459
New Brunswick ..	4,186,800	274,286	
Quebec ..	2,211,792	152,617	
Ontario.....	1,535,144	269,438	
Manitoba and N. W. Territories.....	1,478,665	280,228	
Prince Edward Island.....	1,099,510	212,486	

While a similar table in last year's report showed a falling off in every province but one, this year we have the reverse, a surplus in every province except in British Columbia where the fluctuation of the salmon industry caused a shortage of over half a million dollars as compared with the previous season's yield.

The most important increase is noticed in Nova Scotia, nearly half a million dollars, which is mostly ascribed to large takes of mackerel, especially in the counties of Guysboro' and Halifax.

New Brunswick also shows an increased yield of over a quarter of a million dollars which bears the same ratio to its total value as does its sister province above mentioned.

The inland waters of the Western Territories and Manitoba show no sign of depletion. No less than 11,293,000 lbs. of whitefish are reported from the large lakes of the west.

The various features in the fisheries of every province are fully explained by the different inspectors of fisheries in their respective reports forming the appendices three to ten of this annual report.

The figures here given do not include all the quantity of fish consumed by the Indian population of British Columbia and the Yukon district as well as the remote parts of the North-west Territories where fish constitutes their staple food.

SESSIONAL PAPER No. 22

The following statement shows the relative values of the principal kinds of the commercial fishes (above \$100,000) for the year 1903, as compared with those of the previous year.

Kinds of Fish.	Value.	Increase.	Decrease.
	\$	\$	\$
Cod.. .. .	3,778,430	.....	250,358
Lobsters.....	3,625,382	491,645	
Salmon.....	3,521,158	....	813,881
Herring.....	1,998,950	275,852	
Mackerel... ..	1,644,319	804,951	
Whitefish... ..	883,032	72,159	
Trout	728,153	90,943	
Halibut	631,563	56,122	
Haddock.....	586,806	.....	12,431
Pickerel.....	577,283	169,198	
Sardines	509,021	126,695	
Smelts.....	480,804	22,292	
Hake.....	260,828	4,550	
Pollock.....	250,592	.....
Pike.....	202,913	12,665	
Sturgeon.....	199,286	25,971	
Oysters.....	178,785	23,617	
Clams.....	175,026	.....	63,149
Alewives.....	131,345	....	55,661
Eels.....	121,599	13,195	
Shad.....	103,871	27,604	

The quantity of fish used as bait during the season of 1903 is valued at \$448,182, that of fish oil at \$225,537, and the fur seal skins of British Columbia realized the sum of \$307,440.

A glance at the above table confirms the previous remarks and proves that the betterment in the fisheries was almost as general to the different species of fish as to the different provinces of Canada.

Out of the twenty-one kinds of fish whose value exceeds \$100,000, only five indicated a decrease, while all the others show marked improvement over the previous result.

Salmon, which held the first place in 1902, has fallen to the third rank, being slightly superseded by cod and lobsters. While the shortage in the salmon pack of our western province has caused a deficit of over \$800,000, the lobster industry of the east both preserved and shipping alive, has proved a good season, showing a surplus value of nearly half a million dollars over the preceding yield. But the most important fluctuation is noticed in mackerel which has more than doubled the yield of the previous year. This betterment was specially felt in Chedabucto bay and off the Halifax county coast. The next in importance are the increases of nearly half a million dollars in the lobster industry, and over a quarter million in the yield of herring, not including the \$100,000 surplus in the sardine industry.

In the fresh water species of fish, whitefish, trout and pickerel all show fair increases over the values of the preceding year.

From the year 1869 to 1903 inclusive, the five principal commercial fishes yielded the following large values :—

Cod	\$128,978,513
Salmon	78,073,972
Lobster	72,270,477
Herring	68,105,595
Mackerel	45,089,021

EXPORT OF FISH.

During the last fiscal year, the fish and fish-products as well as marine animals exported from Canada to foreign countries amounted to \$10,759,029, chiefly to United States and Great Britain.

SESSIONAL PAPER No. 22

RECAPITULATION.

Of the Yield and Value of the Fisheries in the Dominion of Canada for the Year 1903.

No.	Kinds of Fish.	Quantity.	Value.	Total.
			\$	\$
1	Cod, dried Cwt.	830,883	3,741,440	
	" fresh Lbs.	504,500	20,180	
	" tongues and sounds Brls.	1,685	16,850	
				3,778,430
2	Haddock, dried Cwt.	75,131	225,393	
	" fresh Lbs.	8,073,503	242,206	
	" smoked (finnan haddies). "	1,986,780	119,207	
				586,806
3	Hake, dried Cwt.	101,125	227,533	
	" sounds Lbs.	66,581	33,295	
				260,828
4	Pollock Cwt.	125,296		250,592
5	Tom Cod or frost fish Lbs.	2,468,030		71,551
6	Halibut "	11,420,128		631,563
7	Flounders "	1,006,095		30,182
	Salmon, preserved in cans "	22,754,727	2,275,976	
	" fresh "	5,212,046	797,724	
8	" smoked "	522,415	53,408	
	" pickled Brls.	7,543	77,770	
	" dry salted Lbs.	6,325,600	316,280	
				3,521,158
9	Trout (all kinds). Lbs.	7,669,927		728,153
10	Ouananiche "	24,300		2,430
11	Whitefish "	14,034,420		883,032
12	Smelts "	9,616,075		480,804
13	Oulachons (in B.C.) "	1,883,520		96,436
	Herring, pickled Brls.	271,076	1,230,451	
14	" fresh Lbs.	22,920,500	461,649	
	" smoked "	11,482,215	275,120	
	" kippered. Cans.	345,300	31,730	
				1,998,950
15	Sardines, preserved in Cans.	2,951,500	147,575	
	" fresh or salted Brls.	180,482	361,446	
				509,021
16	Shad Brls.	10,036		103,871
17	Alewives Brls.	33,411		131,345
18	Pike Lbs.	6,325,425		202,913
19	Maskinonge "	16,950		71,695
20	Perch "	2,080,200		82,576
21	Pickarel "	10,233,340		577,283
22	Bass striped sea "	130,225	13,012	
	" (Achigan) "	72,300	7,109	
				20,121
23	Eels, fresh "	917,650	55,059	
	" salted Brls.	6,654	66,540	
				121,599
24	Mackerel, salted Brls.	64,799	971,992	
	" fresh Lbs.	5,602,726	672,327	
				1,644,319
25	Sturgeon "	1,660,920	146,860	
	" caviare "	64,835	52,426	
				199,286
26	Lobsters, preserved "	10,604,158	2,651,040	
	" alive or fresh Cwt.	108,527	974,342	
				3,625,382
27	Oysters Brls.	35,757		178,785
28	Clams "	58,341	118,829	
	" preserved or in Cans.		56,197	
				175,026
29	Squid Brls.	19,154		76,616
30	Coarse and mixed fish Lbs.	83,063	168,638	
	" " " " Lbs.	16,272,200	441,320	
				609,958
31	Fish as home consumption, not included above "			338,436
32	Fur seal skins in B. C. No.	20,496		307,440
33	Hair seal skins "	11,691		11,669
34	Beluga, or white whale skins "	32		128
35	Fish used as bait Brls.	298,787		448,182
36	" fertilizer "	348,551		200,775
37	Fish oil Galls.	714,529		225,537
	Totals for 1903			23,101,878
	" 1902			21,959,433
	Increase			1,142,445

SHOWING the whole production of the Fisheries in the

Number.	Kinds of Fish.		NOVA SCOTIA.		BRITISH COLUMBIA.		NEW
			Quantity.	Value.	Quantity.	Value.	Quantity.
				\$		\$	
1	Cod, dried.....	Cwt.	496,595	2,234,677	6,127	30,635	89,555
	" tongues and sounds.....	Brls.	857	8,570			*250
	Haddock, dried	Cwt.	62,570	187,710			3,681
2	" fresh.....	Lbs.	6,438,703	193,162			1,459,000
	" smoked (finnan haddies).....	"	1,845,880	110,753			140,900
3	Hake, dried.....	Cwt.	78,424	176,455			18,690
	" sounds.....	Lbs.	41,627	20,813			17,935
4	Pollock.....	Cwt.	104,482	208,964			20,814
5	Tom cod or frost fish.....	Lbs.	302,530	9,076			1,838,500
6	Halibut.....	"	964,316	96,432	10,209,000	510,450	127,600
7	Flounders.....	"	813,095	24,392			191,000
	Salmon, preserved in cans.....	"	5,171	776	22,744,656	2,274,465	4,900
	" fresh.....	"	519,862	103,972	2,506,850	250,685	1,289,840
8	" smoked.....	"	5,865	1,173	510,750	51,075	5,800
	" pickled.....	Brls.	99	1,485	7,075	70,750	
	" dry salted.....	Lbs.			6,325,600	316,280	
9	Trout, all kinds	"	131,477	13,148	364,200	36,420	218,600
10	Ouananiche	"					
11	Whitefish.....	"					9,700
12	Smelts.....	"	360,475	18,024	450,060	22,503	7,755,200
13	Oulachons.....	"			1,883,520	96,436	
	Herring, pickled..	Brls.	51,272	230,724	3,620,000	176,000	159,513
14	" fresh..	Lbs.	11,096,500	110,965			3,983,000
	" smoked.....	"	942,045	18,841	568,440	56,844	9,712,400
	" kippered in cans	"				14,000	177,300
15	Sardines, preserved in.....	Cans.					2,951,500
	" fresh.....	Brls.					180,000
16	Shad	"	3,486	34,860	60	600	6,125
17	Alewives.....	"	14,025	56,100			18,407
18	Pike.....	Lbs.					
19	Maskinonge	"					
20	Eels, salted.....	Brls.	2,308	23,080			2,980
	" fresh.....	Lbs.					
21	Perch	"					
22	Pickarel.....	"					117,900
23	Bass (achigan)	"					
24	Striped sea-bass.....	"	15,725	1,572			114,500
25	Mackerel, salted.....	Brls.	49,532	742,987			440
	" fresh.....	Lbs.	5,075,126	609,015			483,000
26	Sturgeon.....	"			30,000	3,000	6,000
	" caviare and bladders	"					475
27	Lobsters, canned.....	"	5,153,712	1,288,428			2,136,612
	" fresh or alive.....	Cwt.	90,474	827,772			17,545
28	Oysters.....	Brls.	1,354	6,770		18,000	12,470
29	Clams.....	"	10,981	31,814		30,352	45,535
30	Squid.....	"	16,775	67,100			2,183
31	Coarse and mixed fish..	"	73,453	146,906	255	2,550	8,120
	"	Lbs.	274,300	2,743		65,375	
32	For home consumption (not included above)	"				300,000	
33	Fur seal skins (in B.C.).....	No.			20,496	307,440	
34	Hair seal skins.....	"	192	240	5,950	4,462	124
35	Fish used as bait.....	Brls.	78,767	118,151			104,550
36	Fish used as fertilizer.....	"	58,076	29,038	10,600	31,800	179,030
37	Fish oil.	Galls.	283,046	84,914	223,550	78,243	49,300
	Totals.....			7,841,602		4,748,365	

* Add 504,500 lbs. fresh cod, \$20,180.

† Add 212,900 cans of clams, \$21,290, also \$2,430 of scallop

SESSIONAL PAPER No. 22
LATION

different Provinces of Canada for the year 1903.

BRUNSWICK.		QUEBEC.		ONTARIO.		P. E. ISLAND.		MANITOBA AND N. W. TERRITORIES.		Number.
Value.	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.	Quantity.	
\$		\$				\$		\$		
402,998	220,865	993,256				17,741	79,834			1
2,500	308	3,080				270	2,700			
11,043	8,005	24,015				875	2,625			
43,770	55,500	1,665				120,300	3,609			2
8,454										
42,053	326	734				3,685	8,291			3
8,967						7,029	3,515			
41,628										4
55,155	321,500	7,155				5,500	165			5
12,760	117,262	11,726				1,950	195			6
5,730						2,000	60			7
735										
257,968	921,994	184,399				3,500	700			
1,160										8
	369	5,535								
21,860	368,300	36,830	6,492,110	613,971	23,240	2,324	72,000	3,600		9
	24,300	2,430								10
1,455	64,050	6,405	2,667,170	264,997			11,293,500	610,175		11
387,760	309,600	15,480			740,740	37,037				12
										13
717,808	32,263	144,351	3,268	26,148	24,760	111,420				
39,830	528,850	5,288	3,088,150	123,526	604,000	6,040				14
194,248	119,330	2,387			140,000	2,800				
17,730										
147,575										15
360,000	482	1,446								
61,250	365	7,161								16
71,330					979	3,915				17
	240,600	12,030	1,539,325	61,573			4,545,500	129,310		18
	16,950	1,695								19
29,800	204	2,040			1,162	11,620				20
	879,700	52,782	37,950	2,277						
	205,500	10,275	868,700	26,061			1,006,000	35,240		21
8,253	244,900	17,936	2,604,540	260,454			7,266,000	290,640		22
	66,250	6,625	6,050	484						23
11,440										24
6,600	10,201	153,015			4,626	69,390				
57,960	1,500	180			43,100	5,172				25
480	150,670	9,040	494,250	39,540			980,000	94,800		26
428			31,260	18,898			33,100	33,100		
534,153	978,434	244,609			2,335,400	583,850				27
143,230	108	540			400	2,800				
62,350					18,333	91,665				28
†83,115						6,025				29
8,732					196	784				30
16,240					1,235	2,942				
	1,606,400	29,587	2,711,000	97,215			10,180,500	246,400		31
							1,180,000	35,400		32
										33
186	5,425	6,781								34
156,825	77,752	†116,628			37,718	56,578				35
89,515	98,265	49,132			2,580	1,290				36
14,790	151,421	45,426			7,212	2,164				37
4,186,800		2,211,792		1,535,144		1,099,510		1,478,665		

and \$3,036 of dulse. ‡ Add 32 white whales, \$128.

RECAPITULATION—Showing the Total Value of the Fisheries in the respective Provinces of Canada, from 1870 to 1903, inclusive, as compiled from the Annual Reports of the Department of Fisheries.

Year.	Nova Scotia.	New Brunswick.	Prince Edward Island.	Quebec.	Ontario.	British Columbia.	Manitoba and North-west Territories.	Total for Canada.
1870.	\$ 4,019,425	\$ 1,131,433	No data.	\$ 1,161,551	\$ 264,982	No data.	\$ No data.	\$ 6,577,391
1871.	5,101,030	1,185,033	"	1,093,612	193,524	"	"	7,573,199
1872.	6,016,835	1,965,459	"	1,320,189	267,633	"	"	9,570,116
1873.	6,577,085	2,285,662	207,595	1,391,564	293,091	"	"	10,754,997
1874.	6,652,302	2,685,794	288,863	1,608,660	446,267	"	"	11,681,886
1875.	5,573,851	2,427,654	298,927	1,596,759	453,194	"	"	10,350,385
1876.	6,029,050	1,953,389	494,967	2,097,668	437,229	104,697	"	11,117,000
1877.	5,527,858	2,133,237	763,036	2,560,147	438,223	583,433	"	12,005,934
1878.	6,131,600	2,305,790	840,344	2,664,055	348,122	925,767	"	13,215,678
1879.	5,752,937	2,551,722	1,402,301	2,820,395	367,133	631,766	"	13,529,254
1880.	6,291,061	2,744,447	1,675,089	2,631,556	444,491	713,335	"	14,499,979
1881.	6,214,782	2,930,904	1,955,290	2,751,962	509,903	1,454,321	"	15,817,162
1882.	7,131,418	3,192,339	1,855,687	2,751,962	825,457	1,842,675	"	16,824,092
1883.	7,689,374	3,185,674	1,272,468	1,976,516	1,027,033	1,644,646	"	16,958,192
1884.	8,763,779	3,730,454	1,085,619	1,694,561	1,133,724	1,358,267	"	17,766,404
1885.	8,283,922	4,005,431	1,293,430	1,719,460	1,342,692	1,078,038	"	17,722,973
1886.	8,415,362	4,180,227	1,141,991	1,741,382	1,435,998	1,577,348	186,980	18,679,288
1887.	8,379,782	3,559,507	1,037,426	1,773,567	1,531,850	1,974,887	129,081	18,386,103
1888.	7,817,030	2,941,863	876,862	1,860,012	1,839,869	1,902,195	180,677	17,418,510
1889.	6,346,722	3,067,039	886,430	1,876,194	1,963,123	3,318,067	167,679	17,655,256
1890.	6,636,444	2,699,055	1,041,109	1,615,119	2,009,637	3,481,432	232,104	17,714,902
1891.	7,011,300	3,571,050	1,238,733	2,008,678	1,806,389	3,008,755	332,969	18,977,878
1892.	6,340,724	3,203,922	1,179,856	2,236,732	2,042,198	2,849,483	1,088,251	18,941,171
1893.	6,407,279	3,746,121	1,133,368	2,218,905	1,694,930	4,443,963	1,042,093	20,686,661
1894.	6,547,387	4,351,526	1,119,738	2,303,386	1,659,968	3,959,478	75,087	20,719,573
1895.	6,213,131	4,403,158	976,836	1,867,920	1,584,473	4,401,354	752,466	20,199,338
1896.	6,070,895	4,799,433	976,126	2,025,754	1,605,674	4,183,999	745,543	20,407,425
1897.	8,090,346	3,934,135	954,949	1,737,011	1,289,822	6,138,865	638,416	22,783,546
1898.	7,226,034	3,849,357	1,070,202	1,761,110	1,433,632	3,713,101	613,355	19,667,121
1899.	7,347,604	4,119,891	1,043,645	1,953,134	1,590,447	5,214,074	622,911	21,891,706
1900.	7,809,152	3,769,742	1,059,193	1,989,279	1,333,294	4,878,820	718,159	21,557,639
1901.	7,989,548	4,193,264	1,050,623	2,174,459	1,428,078	7,942,771	958,410	25,737,153
1902.	7,351,753	3,912,514	887,024	2,059,175	1,265,706	5,284,824	1,198,437	21,959,433
1903.	7,841,602	4,186,800	1,099,510	2,211,792	1,535,144	4,748,365	1,478,665	23,101,878
Total.	231,598,404	108,906,026	32,207,237	66,741,591	37,842,930	83,379,726	11,873,289	572,449,223

SESSIONAL PAPER No. 22

CAPITAL INVESTED IN THE CANADIAN FISHERIES
1903.

No less than 79,134 men were engaged during the year 1903 in the Canadian Fisheries, not including the thousands of persons employed in the lobster branch of this industry. These fishermen used over six millions and a half of fathoms of gill-nets and seines besides other fishing gear and fixtures, representing an aggregate capital of \$12,241,454.

This shows nearly one million dollars in excess of the capital invested in the same industry during the previous season.

Alone the lobster plant is valued at \$1,378,197, comprising all the equipment of the 714 canneries dispersed on the sea coast of the maritime provinces. Nova Scotia had 242 such canning establishments, New Brunswick 199, Prince Edward Island 190, and Quebec only 83. Over 14,000 persons found employment in this lobster packing industry which placed on the market over ten millions and a half 1 lb. cans, besides a larger quantity of this crustacean disposed of alive or in a fresh state, both aggregating the handsome value of \$3,625,000.

The salmon canning industry of British Columbia during the year 1903 consisting of seventy-five canneries valued with all equipments at \$1,312,500, gave employment to over seventeen thousand persons and placed on the market nearly twenty-three million cans of salmon, exclusive of the ten millions lbs. otherwise disposed of fresh, salted or smoked. The whole catch of this valuable fish aggregating nearly *three million dollars*.

The *sealing* fleet from the same province during the season of 1903 consisted of only *twenty six* vessels using 92 boats and 164 canoes, manned by 299 white men and 338 indians. This fleet with its full equipment is valued at nearly one half million dollars. As noticed elsewhere the value of the fur seal hunt for that year (20,496 skins) is given at over \$300,000.

RECAPITULATION.

Showing the Value of Fishing Vessels, Boats, Nets, &c., and of the other Capital invested in the Fishing Industry of Canada in 1903.

PROVINCES.	FISHERMEN IN		VESSELS.		BOATS.		VESSELS.		BOATS.		VESSELS.		BOATS.		TOTAL VALUE.
	Number.	Value.	Number.	Value.	Number.	Value.	Number.	Value.	Number.	Value.	Number.	Value.	Number.	Value.	
Nova Scotia.....	5,669	17,729	576	25,061	1,214,625	11,867	336,003	1,627,532	638,677	243,857	640,739	843,527	3,937,428		
New Brunswick.....	1,200	11,212	352	4,837	153,675	7,388	216,333	940,609	446,263	352,018	335,837	500,935	2,005,391		
Prince Edward Island.....	202	3,504	41	839	17,350	2,013	53,424	83,379	28,635	13,452	303,321	48,910	464,792		
Quebec.....	214	14,661	38	1,580	30,245	7,687	222,275	332,351	208,999	225,824	98,360	339,235	1,124,848		
Ontario.....	560	2,443	109	1,798	286,275	1,370	95,878	2,011,240	233,133	147,441		83,621	846,368		
British Columbia.....	585 637	17,915	169 124	4,430 1,717	355,050 452,250	5,024 256	306,640 827,000	1,809,950	645,637	12,025		1,487,500	3,256,102		
Manitoba and N. W. Terri- tories.....	237	2,336	131	2,460	245,410	2,338	60,450	737,800	134,080	6,000		160,585	606,525		
Totals.....	9,304	69,830	1,343	42,712	2,755,150	40,943	1,338,003	6,542,864	2,305,444	1,378,197	1,000,347	3,464,313	12,241,454		

¹ Sealers and hunters. ² Mostly Tugs. ³ Sealing fleet. [§] Includes equipment.

RECAPITULATION.

Statement of the Lobster industry in Canada during the season of 1903.

Provinces.	Number of Persons employed.	PLANT.					CATCH.				
		Number of Canneries.	Value.	Number of Traps.	Value.	Total value of Plant.	Number of Cans, Lbs.	Value.	Fresh or Alive, Cwt.	Value.	Total value of Catch.
Nova Scotia	4,862	242	193,170	628,602	147,569	640,739	5,153,712	1,288,428	90,474	827,772	2,116,200
New Brunswick	4,891	199	116,300	240,449	219,537	335,837	2,136,612	534,153	17,545	143,230	677,383
Prince Edward Island	2,612	190	143,291	253,195	160,050	303,321	2,337,400	583,850	400	2,800	586,650
Quebec	1,653	83	40,850	86,310	57,450	98,300	978,434	244,609	108	540	245,149
Totals	14,018	714	493,611	1,208,556	884,586	1,378,197	10,604,158	2,651,010	108,527	974,342	3,625,382

COMPARATIVE TABLE showing Number, Tonnage and Value of Vessels and Boats engaged in the Fisheries of Canada, together with the Value of Fishing Materials employed, from 1879 to 1903.

Year.	VESSELS.			BOATS.		Value of Nets and Seines.	Value of other Fishing Ma- terial.	Total of Capital Invested.
	No.	Tonnage.	Value.	No.	Value.			
			\$		\$	\$	\$	\$
1879.	1,183	43,873	1,714,917	25,616	854,289	988,698	456,617	4,014,521
1880... ..	1,181	45,323	1,814,688	25,266	716,352	985,978	419,564	3,936,582
1881.....	1,120	48,389	1,765,870	26,108	696,710	970,617	679,852	4,113,049
1882.....	1,140	42,845	1,749,717	26,747	833,137	1,351,193	823,938	4,757,985
1883.....	1,198	48,106	2,023,045	25,825	733,186	1,243,366	1,070,930	5,120,527
1884.	1,182	42,747	1,866,711	24,287	741,727	1,191,579	1,224,646	5,014,663
1885... ..	1,177	48,728	2,021,633	28,472	852,257	1,219,284	2,604,285	6,697,459
1886.	1,133	44,605	1,890,411	28,187	850,545	1,263,152	2,720,187	6,814,295
1887.....	1,168	44,845	1,989,840	28,092	875,316	1,499,328	2,384,356	6,748,840
1888... ..	1,137	33,247	2,017,558	27,384	859,953	1,594,992	2,390,502	6,863,005
1889... ..	1,100	44,936	2,064,918	29,555	965,010	1,591,085	2,149,138	6,770,151
1890.....	1,069	43,084	2,152,790	29,803	924,346	1,695,358	2,600,147	7,372,641
1891... ..	1,027	39,377	2,125,355	30,438	1,007,815	1,644,892	2,598,124	7,376,186
1892.....	988	37,205	2,112,875	30,513	1,041,972	1,475,043	3,017,945	7,647,835
1893.....	1,104	40,096	2,246,373	31,508	955,109	1,637,707	3,174,404	8,681,557
1894.....	1,178	41,768	2,409,029	34,102	1,009,189	1,921,352	4,099,546	9,439,116
1895... ..	1,121	37,829	2,318,290	34,268	1,014,057	1,713,190	4,208,311	9,253,848
1896.....	1,217	42,447	2,041,130	35,398	1,110,920	2,146,934	4,527,267	9,826,251
1897.....	1,184	40,679	1,701,239	37,693	1,128,682	1,955,304	4,585,569	9,370,794
1898.	1,154	38,011	1,707,180	38,675	1,136,943	2,075,928	4,940,046	9,860,097
1899.....	1,178	38,508	1,716,973	38,538	1,195,856	2,162,876	5,074,135	10,149,840
1900... ..	1,212	41,307	1,940,329	38,930	1,248,171	2,405,860	5,395,765	10,990,125
1901... ..	1,231	40,358	2,417,680	38,186	1,212,297	2,312,187	5,549,136	11,491,300
1902... ..	1,296	49,888	2,620,661	41,667	1,199,598	2,103,621	5,382,079	11,305,959
1903... ..	1,343	42,712	2,755,150	40,943	1,338,003	2,305,444	5,842,857	12,241,454

SESSIONAL PAPER No. 22

COMPARATIVE TABLE showing the number of men employed in the Fishing Industry since 1879.

Year.	Number of Persons in Lobster Canneries.	Number of Men in Vessels.	Number of Men in Boats.	Total Number of Fishermen.	Total Number of Persons in Fishing Industry.
1879.....		8,818	52,577	61,395	
1880.....		8,757	51,900	60,657	
1881.....		8,359	50,679	59,056	
1882.....		8,498	52,785	61,283	
1883.....		9,966	52,259	62,225	
1884.....		9,968	51,854	61,822	
1885.....		9,539	53,282	62,821	
1886.....		8,927	53,073	62,000	
1887.....		8,911	55,247	64,158	
1888.....		9,574	53,109	62,683	
1889.....		9,621	55,382	65,003	
1890.....		8,726	55,000	63,726	
1891.....		8,666	56,909	65,575	
892.....		8,330	55,348	63,678	
1893.....		8,899	58,854	67,753	
1894.....		9,525	61,194	70,719	
1895.....	13,030	9,804	61,530	71,334	84,364
1896.....	14,175	9,735	65,502	75,237	89,412
1897.....	15,165	8,879	70,080	78,959	94,124
1898.....	16,548	8,657	72,877	81,534	98,082
1899.....	18,708	8,970	70,893	79,893	98,601
1900.....	18,205	9,205	71,859	81,064	99,269
1901.....	15,315	9,148	69,142	78,290	93,605
1902.....	13,563	9,123	68,678	77,801	91,364
1903.....	14,018	9,304	69,830	79,134	93,152

THE FISHERIES STAFF.

Including the twenty inspectors of Fisheries below enumerated, the outside staff of officers connected with the Fisheries Branch of the service during the last calendar year aggregates 750 employees as follows :

There are 105 regular fishery overseers with magisterial powers (*ex-officio*) and 434 fishery guardians employed at different periods of the year to assist the permanent

4-5 EDWARD VII., A. 1905

officers. The different crews of the protection fleet actually engaged this year on the Fisheries service was 151.

The number of officers in charge of our 22 fish hatcheries with their assistants was forty: not including the number of persons employed at times for the collection of eggs as well as the distribution of the fry.

The following are Inspectors of fisheries in the different provinces of the Dominion.

Name.	P. O. Address.	Extent of Jurisdiction.
Bertram, A. C.....	North Sydney, N.S.	District No. 1.—Cape Breton Island.
Hockin, Robt.....	Pictou, N.S.....	District No. 2.—Cumberland, Colchester, Pictou, Antigonish, Guysboro', Halifax and Hants counties.
Ford, L. S.....	Milton, N.S.....	District No. 3.—Lunenburg, Queen's, Shelburne, Yarmouth, Digby, Annapolis and King's counties.
Pratt, J. H., capt.....	St. Andrews, N.B....	District No. 1.—The counties of Charlotte and St. John.
Chapman, Robt. A....	Moncton, N.B....	District No. 2.—Restigouche, Gloucester, Northumberland, Kent, Westmorland and Albert counties.
Harrison, H. E.....	Fredericton, N.B. .	District No. 3.—King's, Queen's, Sunbury, York, Carleton, and Victoria counties.
Matheson, J. A.....	Charlottetown.....	Prince Edward Island.
Wakeham, Wm., M.D..	Gaspé Basin, Que...	Lower St. Lawrence River and Gulf.
Lavoie, N., M.D.....	L'Islet, Que.....	That portion of Quebec south of River St. Lawrence and north and east of and including county of Bellechasse.
Belliveau, A. H.....	Ottawa.....	Province of Quebec, north of River St. Lawrence and west from and including River Saguenay, and the portion which lies west and south of the county of Bellechasse to Pontiac.
Riendeau, Jos.....	Montreal.....	The counties of the province of Quebec bordering on the St. Lawrence from Huntington to Three Rivers.
Hurley, J. M.....	Belleville, Ont....	That portion of Ontario east of the western boundary line of the counties of Durham, Victoria and Haliburton, including Lake Scugog and the eastern boundary of Muskoka and Parry Sound districts.
Sheppard, O. B.....	Toronto, Ont.....	That part of the province of Ontario west of the eastern boundaries of the county of Ontario, and the districts of Muskoka and Parry Sound along the Mattawa and Ottawa rivers, and northward along the north-eastern boundary line of said province to James bay.
Duncan, A. G.....	Marksville, Ont....	That portion of Ontario lying west and north of Lake Nipissing, the Rivers Mattawa and Ottawa and the north-east boundary line of the province to James bay, embracing Nipissing, Algoma, Thunder bay and Rainy river districts, Lake Superior and such portions of Lake Huron and Georgian bay as lie adjacent or opposite to the part of Ontario above described.
Young, Wm. S.....	Selkirk, Man.....	Province of Manitoba.
Miller, E. W.....	Qu'Appelle, N.W.T.	Eastern part of the North-west Territories.
Young, Harrison S.....	Edmonton.....	Western part of the Territories.
Stewart, Theophilus....	Dawson City.....	Yukon district.
Sword, C. B.....	N. Westminster, B.C.	Province of British Columbia.—No. 1. Southern district.
Williams, J. T.....	Port Essington.....	" " No. 2. Northern district.

SESSIONAL PAPER No. 22

The following are the officers in charge of the Government Fish Hatcheries :

Name.	P. O. Address.	Rank.
Cunningham, F. H.	Ottawa	Superintendent of Fish Culture.
Finlayson, Alex	"	Inspector.
Armstrong, Wm.	Newcastle, Ont.	Officer in charge of Government Fish Hatchery.
Parker, Wm.	Sandwich, Ont.	"
Walker, John	Ottawa, Ont.	"
Deseve, A. L.	Magog, Que	"
Catellier, L. N.	Tadoussac, Que	"
Lindsay, Robert	Gaspé Basin, Que	"
Elliott, Jos.	St. Alexis des Monts, Que	"
Longpré, M.	Mont Tremblant, Que	"
Mowat, Alex.	Campbellton, N.B.	"
McCluskey, Chas.	Grand Falls, N.B.	"
Sheasgreen, Isaac	South Esk, Miramichi, N.B.	"
Landry, Arcade	Shippegan, N.B.	"
LeBlanc, N. S.	Cape Bald, N. B.	"
Ogden, A.	Bedford Basin, N.S.	"
*Doherty, E.	Pictou, N.S.	"
Carmichael, A. G.	N. E. Margaree, N.S.	"
Young, W. S.	Selkirk, Man.	"
Sword, C. B.	New Westminster, B. C.	"
Whitwell, Thos.	Skeena River, B.C.	"
Mitchell, D. S.	Granite Creek, B.C.	"
Robinson, T.	Harrison Hot Springs, P.O.	"
Kempt, Ernest	Charlottetown, P.E.I.	Oyster Culture.

* Died December 1904.

FISHING SEASON OF 1904.

PRELIMINARY REPORTS OF THE FISHERY INSPECTORS OF CANADA.

From a cursory glance at the following brief reports from our inspectors of fisheries, it becomes evident that while the fishing season of 1904 just closed will fall short in its general yield, the cash value to the fishermen might prove as remunerative as heretofore, the prices of most species being generally reported higher than last year.

The salmon preserving industry of British Columbia will be inferior to that of 1903. In fact the Fraser River Branch of the industry was almost a failure. Hardly more than a third of the number of cases packed in 1903 was put up this summer. Fortunately the Skeena and other northern districts came to the rescue and brought the aggregate pack of the whole province within fifteen thousand cases of last year's product.

The new inspector for the northern part of British Columbia reports the halibut fisheries in a prosperous state. He is of opinion that many other deep-sea fisheries would prove profitable investments for enterprising persons with capital.

In the inland western districts the smaller yield is ascribed to unfavourable weather, but prices of fish ruled higher as the transportation problem is being gradually solved.

In Ontario and Quebec there are complaints of overfishing with undersized gear destroying immature fish, and it requires more implements to keep up the supply. Drastic measures are recommended by our officers to save the situation.

In the maritime provinces one fluctuation will balance another and the final result may not prove very inferior to that of 1903, which showed one of the largest aggregate value on record. However, the season was stormy and the staple species like cod, herring and mackerel will fall quite short of last year.

It is noted that the dog-fish nuisance was not so general in the provinces as during the last few years.

NOVA SCOTIA.

Inspector Robt. Hockin, of Pictou, says that the result of the past season's fishery operations in this district that there has been a considerable decrease in the catch of most of the line seafish, such as cod, haddock, hake, pollock and halibut, amounting to probably twenty-five per cent. There was a very large catch of mackerel last year, and when this season's catch is compared with it, the shortage will be about sixty per cent.

The herring fishery was also short of last year by about ten per cent. The lobster returns show that the catch is nearly equal to that of last year, it may be 5 to 7 per cent short.

The salmon fishery shows results nearly equal to last year while the shad fishery was again a failure and those interested are calling for remedial legislature.

From all parts of the district reports are received of the depredations of dogfish.

Inspector L. S. Ford, of Milton, Queen's county, reports that in the absence of authentic figures, which are now being collected, it will be impossible to give an exact estimate of the year's fishing.

SESSIONAL PAPER No. 22

Taking the county of Lunenburg for instance, as a standard for bank fishing, it makes a better showing than last year, comparatively speaking, as there were fifteen vessels less than last year engaged in the business. The boat fishing also shows better than last year. Herring will show a large increase and mackerel about the same. This estimate will hold good for all the western Atlantic counties, so far as deep sea fisheries are concerned.

The Lobster fishing will probably show a marked increase in the seasons work. Up to the close of the season they were plentiful.

The river fisheries are improving, although some more effective regulations are needed for their protection.

Taking the whole season into consideration, the fishermen on the whole did fairly well. Some good work was done in clearing out the river or allowing the fish to pass through the dams. Lequille river, Annapolis county, was favoured with a Bower's fish-way, a gem of its kind.

Our river fisheries are of more importance than they are generally credited for. An idea is prevalent, that any expenditure on them, is for the benefit of the sportsman. But it is well known that the deep sea fish come into the harbour and estuaries of the rivers for the sole purpose of feeding on the young fry that come down the rivers during the fall and spring. This may largely account for their absence from the harbours where once they abounded. Scarcity of bait and the ravenous dog-fish are important factors in the profit and loss account of fishermen. Taking it all together an average yield can be safely estimated which the coming statistics of the next annual report will show.

NEW BRUNSWICK.

Inspector Pratt, of St. Andrew's, says: The aggregate catch for the season just closing will show quite an increase over that of 1903, and the majority of the fishermen are well pleased with their season's work. Large size herring struck in early during the winter season and the many net fishermen made good catches and received a remunerative price for their herring. The smaller size for sardine purpose struck the shore in small schools quite early in the season and the demand being good for the Eastport factories, as high as \$25 per hogshead was paid for them. This gradually dropped in the middle of the season to \$3 per hogshead, at which price it remained till the end of season.

Hake will show a good increase in the catch and value over previous years, in fact the price paid our fishermen per quintal has not been so high for many years. About the same catch of pollock as in 1903 will be shown, and, although the Grand Manan schools will show a lessening in their size, the catch in Quoddy River will indicate quite a pleasing increase. The price per quintal received by the fishermen during the season was very high, in fact, much higher than for many years past. The catch of cod and haddock will show about the same as in 1903, and perhaps a slight increase may be shown. There was quite a large increase in the value of both of these fish.

The dog-fish were not as plentiful as in previous years, which fact was of immense assistance to all the line and trawl fishermen in their operations, and it is to be earnestly hoped that this scourge to our fisheries is now taking its departure.

4-5 EDWARD VII., A. 1905

The returns for the lobster fishery will show a catch about the same as last year, in all probability somewhat less, owing to a change being made in the size limit in Charlotte county, where the limit was raised from nine inches to ten and one half inches, thereby curtailing the catch somewhat in that county. As the fishing was extremely good in St. John county the decrease in Charlotte county will be compensated for to a great extent.

The fisheries commissioners appointed by your department visited the many fishing villages in the Bay of Fundy, most of the time on the *Curlew* making careful and exhaustive inquiries into the state of the numerous fisheries, and there is not the slightest doubt that this inquiry will bring forth beneficial results.

Inspector R. A. Chapman, of Moncton, says that the aggregate quantity will scarcely come up to that of the previous year, but owing to the very high prices prevailing the results have been generally satisfactory to those engaged in the business with, perhaps one exception, salmon,

Salmon fishing generally was poor, a fair catch was reported on some portions of the coast, but generally was not up to the average, yet the guardians report the streams full this fall, especially on the head waters of the south-west Miramichi river.

Shad fishing of course owing to destruction of the parent fish in St. John harbour and river during spawning time in the spring, is almost a thing of the past.

Spring herring were caught in immense numbers for every available use including increased quantities smoked. Fall herring on the Caraquet, Miscou banks, struck in fairly well, but heavy storms broke up nets, &c., and interfered much with the catch, more care should be taken in the curing of these fish which would insure better prices.

The take of codfish in the aggregate is fully as large as last year and except for the scarcity of bait, would have been larger, as the dog-fish nuisance does not appear to have been quite as detrimental as in 1903. Prices ranged higher than ever before: these fish only partly dried sold for five dollars per 100 lbs. at Caraquet.

Smelt fishing was good during winter of 1904, the fish were of good size and brought higher prices than ever heretofore: weather being very cold enabled dealers to get them to market in fair condition and thus made good profits. This fall the first run is of small size. This fishery is of great importance being generally worth fully half a million dollars.

The quantity of oysters raked will be about the same as last year, but they have sold at higher prices than ever before. The take of hard shell clams (quahaugs) has been enormous, in all upwards of forty thousand barrels, worth one hundred thousand dollars. The fishermen raking them realized from three to five dollars per day. Soft shell clams were also taken in large quantities for canning purposes.

The pack of lobsters will be about the same as in 1903, a large increase north of Escuminac and a corresponding decrease south of that point. Much is expected from the new hatcheries.

The catch of other kinds of fish will be about an average one.

Inspector H. E. Harrison, of Fredericton, reports that the fisheries in his inland district will probably be found a little short of 1903, if reports from some of the fishery officers are correct. While the catch of salmon will perhaps not be quite as good as last

SESSIONAL PAPER No. 22

year on the St. John, where they are all netted, the fly fishing has been most satisfactory on the Tobique river, probably as good as that of last year, which was the best in the history of the Tobique Salmon Club. Most probably the salmon ascended the St. John earlier this year than usual. They were caught at the mouth of the river before the ice ran out, and probably a large number reached well up to the Tobique before the nets could be set, which was fortunate for the fish and their future supply, as the Tobique is their best available spawning grounds.

The amount of shad taken seems to be somewhat less on the lower reach of the river and the tributaries, but is reported good further up, and the demand is far beyond the supply.

The market for alewives again is quite satisfactory after an off year, and the quantity taken was quite large.

Bass fishing was unsatisfactory, in fact is reported a failure by the few who had licenses to fish. It is difficult to account for this. Not many years ago two persons caught \$600 worth of bass in one season.

Some sturgeon were caught in the St. John river again this year, but not 5 per cent of what could be caught twenty years ago.

Trout are reported plentiful in all the lakes and brooks where they are usually found, and sportsmen can generally get enough to satisfy themselves.

PRINCE EDWARD ISLAND.

Inspector J. A. Matheson, of Charlottetown, says that the fishing industry of this province has been well maintained during the last season, and fishermen are generally well satisfied, with the year's work. On the south side of the island the catch of lobsters was short, but the increases on the north side will bring the catch fully up to that of last season.

Codfish and hake were plentiful but owing to the increase of dog-fish the catch was scarcely an average one. Mackerel were not plentiful but of good quality. The catch of oysters was about as usual and good prices prevailed throughout the season. Smelt fishing was good and owing to the continued cold weather fish arrived in good condition and large returns were the result. Sufficient herrings were taken for baiting purposes for which they are generally used.

QUEBEC.

Doctor Wakeham, officer in charge of the Gulf of St. Lawrence division, reports that as far as can be ascertained a decrease will be shown in most of the commercial fishes of the division, but from various causes prices were high, and the actual return to the fisherman has fully compensated him for his lessened catch. Very little snow fell in the gulf division during the winter of 1903, while the spring was early, so that by the time the salmon struck the shore the water was low in the rivers, and the fish did not run in. The summer also was dry, so that in many rivers, certainly in the smaller ones, the fish only ran in after the close of the fishing season. In the very large rivers, especially on the north shore, which are not so much affected by the snow fall and spring freshets, salmon were very abundant.

4-5 EDWARD VII., A. 1905

Strong westerly winds prevailed during the late spring and summer, this kept both cod and herring off shore, while during the fall the weather was constantly rough, so that fishermen gave up early, and sought other employments. The larger and heavier boats which fish well off shore, and could hang it out did well, and reported both fish and bait abundant.

It is noticed that owing to the demand for labour, especially in the lumber mills and camps and the numerous public works which are being carried on, it is getting yearly more difficult to secure fishermen, so that fewer men are engaging in the fishery and therefor a shorter season, while the men are becoming less expert, not so hardy and unwilling to run the risks and accept the hardships of the old time fishermen.

The shortened packing season at the Magdalen Islands fully accounts for the smaller pack, as the open season closed (June 25) just as the season was at its best, had the fishing lasted another 10 days, and continued as good as it was during the last week of the fishing, the pack would have been quite up to the average. As an experiment, on the recommendation of the Lobster Commission, a month's fishing was allowed in the fall, but it did not amount to anything. Some of the larger packers did not re-open, those who did found the lobsters scarce, and in poor condition, empty and thin. While owing to the heavy weather which prevailed during all the time of the fall fishing, it was only in the most sheltered localities that traps could be risked out. Those who were most urgent in demanding an open season in the fall are now pretty well satisfied that it will not work. The evidence seems conclusive that if we can thoroughly protect the lagoons, the lobster supply can be kept up, that is of course along with a reasonable open season—say from April 20 to July 10—together with certain restrictions as to the amount of packing to be allowed.

Herring were as abundant as ever in the spring, but scarce in the inshore waters during the summer and fall.

The dog-fish did not interfere as seriously with the fishery as they did in 1902 and 1903, in fact in most of the upper waters, at the head of the Baie Chaleurs, and well up the gulf, where they were abundant two seasons ago, we did not find them at all this year. It is therefore to be hoped that they may be backing off again.

Many people have been experimenting with the dog-fish, as an article of food, all those who have given it a trial speak well of it, as being wholesome and palatable, those who were given it, not knowing what it was, were quite ready to accept it as halibut.

Inspector Joseph Riendeau, of Montreal, says: The district under my supervision comprises that part of the province of Quebec between the county of Champlain to the county of Soulanges and on the North side of the St. Lawrence and its tributaries.

In a part of Nicolet county, facing the St. Lawrence, the fishermen are fishing the whole year, without stopping even in July and August. The same may be said of many other sections in my division. This explains sufficiently the wholesale destruction of small fish; generally the seine used have one inch meshes and sometimes less. The best fish are sent to the Montreal markets and the remainder goes to Three Rivers and in the country villages. In my humble opinion, fishing should be prohibited during the summer months.

In lake St. Peter, the law is neither observed nor respected. All kinds of nets are used, principally hoop nets, gill nets, seines, and drag nets. Some are as much as 75

SESSIONAL PAPER No. 22

feet long and all they pay for a license is from two to three dollars. It may also be said that they are not very particular as to meshes ; small meshes prevail, though the regular ones may also be seen. There has been a large decrease in the fish in all the places bordering lake St. Peter.

The small minnow net ought to be prohibited. People bait their night lines indifferently with small bass, doré, perch, pike, silver fish as often as with the genuine minnow. In Richelieu river from Sorel as far as St. Ours, the fishermen of Ile St. Ignace go and catch the doré with nets in the close season. If that part of the river was put under prohibition great benefit would be the result. Thousands of doré would have a chance to spawn. From Contrecoeur to Laprairie, the law is fairly respected. The same may be said of Lake St. Louis. The Lake of Two Mountains does not give satisfaction. Hoop nets and gill nets are used there and they are acknowledged as being destructive implements. This answers for the great quantity of fish uselessly caught and thrown on the shore.

Last summer, drag and gill nets were largely used on lake St. Francis. People loudly complained about this abuse and wondered if licenses were granted to these fishermen when the Federal law forbade it. All the other rivers may be said to give a fair satisfaction, with the exception of Back river where the overseers seem to be negligent. On the lakes in the counties of Terrebonne, and St. Maurice, the law is ignored. The overseers, if there are any, never give any sign of life. Night lines are used in different places, in all these lakes.

I consider it my duty to suggest that if fishing with nets in all the small rivers, was prohibited during the spring, great advantages should follow immediately.

I also believe, very sincerely, that the use of coal tar should be put a stop to in Lake St. Peter. Fishermen soak their nets in coal tar and throw them immediately in the river to fish. This constitutes an active and a regular poison easily ascertained when we are on the spot. Spearing of any kind of fish should be strictly prohibited the year round.

Lastly, I would suggest that fishing for speckled trout in the lakes should be restricted and a certain minimum length be determined when being fished. The general length of the trout that reach Montreal is only four to five inches which is too small.

Inspector A. H. Belliveau, of Ottawa, states that judging from his few visits to the principal localities of the inland district under his charge, the fishery yield of the season just closed will be still inferior to the previous one. Not only the fish are scarcer and of smaller size, but the better grades are steadily making way to inferior species. To overnetting in the past, and the indiscriminate use of small-meshed gear capturing immature fish, may be ascribed this deplorable result.

A pleasing feature was the re-appearance of shad in fair quantities along the St. Lawrence. So poor had the catch of that anadromous fish been, for the last few years, that fishermen had almost given up the hope of ever seeing them again return to their former haunts.

In the eastern townships, fishing was poor, especially for bass and pickerel which seem to be steadily decreasing in those beautiful lakes and their tributaries. At Missisquoi bay, the catch of 1904 was not quite so good as the previous one, but the prices were much better, so the result is satisfactory to the few seiners of that vicinity.

For the first time since my appointment as inspector, I visited the upper waters of Pontiac county or the Mattawa district. I found Lake Temiscamingue, which is an enlargement of the Ottawa river, there dividing the provinces of Ontario and Quebec, a much more extensive sheet of water than could be imagined by a glance at the maps. I was surprised to discover that not only this large lake is not protected in the interest of the settlers on its shores, but the provincial authorities of Quebec have leased large areas of it to a non-resident firm, who is fishing it indiscriminately with a large number of pound-nets. It is regrettable that such extensive commercial fishing with tugs and pound-nets is tolerated in these interprovincial waters to benefit a couple of non-resident speculators who will simply move elsewhere when their task of depletion is accomplished to the detriment of the genuine resident settlers of the locality.

Lake Massawippi in the county of Stanstead has been recently set apart for the natural propagation of fish therein. Angling only is permitted and that itself from May 24 to October 20 in each year.

ONTARIO.

Inspector J. M. Hurley, of Belleville, says: Fishing along Lake Ontario, from Cobourg east, Bay of Quinté, and on the St. Lawrence river, for whitefish and herring, has been better than for several years past.

Fishing for coarse fish has also been very good and the season of 1904 may be considered a very profitable one to the persons engaged in this industry in Eastern Ontario.

The waters over which my inspectorate extends abound in sporting fish, and anglers have had a splendid season. As an example of this during the season, a black bass weighing five and a half pounds was taken in the Bay of Quinté and at Glen Island a very large Maskinongé was captured. A black bass weighing six pounds two ounces was also taken in the river Trent. This is supposed to be the largest fish of this species ever taken in these waters.

Trout fishing is on the increase and this satisfactory result can safely be attributed to the judicious distribution of fry from the fish breeding establishments under the control of the federal government. Whilst the regulations are fairly well enforced it is necessary, that the inland lakes and rivers should receive more attention in this direction, owing to the large increase in the number of tourists and local anglers.

Owing to the fact that the provincial government derive no revenue from the inland lakes and small rivers there are only a few persons employed in protecting the fish and they are allowed only a very small remuneration. In the large lakes and rivers from whence the bulk of the revenue is received the regulations are very well enforced and fishermen are learning that it is to their interest and welfare to observe them and foster the fishing industry as much as possible.

The departmental bass pond located on the Bay of Quinté being in my district has received a great deal of my attention during the year, and I am pleased to make reference to the very satisfactory results derived from it. Specimens of the young bass hatched there were exhibited at the Toronto Exhibition and formed one of the most popular features of the exhibition.

During the coming season it is my intention to visit and inspect a number of lakes in my district with a view of re-stocking such waters as have been depleted and which

SESSIONAL PAPER No. 22

a continuous judicious distribution of the various species hatched in the government establishments will re-stock.

Inspector O. B. Sheppard, of Toronto, reports as follows : As far as I can learn, the fisheries in my division have not been up to the average of the past four or five years.

This applies particularly to the rod and line fisheries which in international as well as inland waters show a very material decrease. I am satisfied that this decrease will continue from year to year unless more drastic regulations are made and enforced. In my opinion no netting of any kind should be allowed on the breeding grounds of game fish. To my mind the close season for whitefish and lake trout, (including salmon and gray trout) should be lengthened to include the month of October, making the close season from October 1, to December 1, as there is no question that in the average year the above fish are nearly through spawning by November 1, the time when the close season begins—thus allowing them to be caught when on their spawning beds, depositing their spawn. If this were done I think it would in a few years, have a very beneficial effect on our fisheries, as it is impossible to go on year after year destroying the seed and still look for a crop.

While I do not think it would be wise to prohibit the taking of whitefish during the entire spawning season, which varies in different parts of the province, from September 1, to December 1, I am satisfied that the above close season, viz. : October and November, would have very beneficial results. One thing, to my mind, is certain, that the time for more drastic regulations has arrived if the fisheries are to be kept up to anything like their average standard. I would suggest a conference between the Dominion Fishery Officials and the principal fishermen from various parts of the province, (international and inland waters) when the whole situation could be gone into and the actual facts ascertained and proper remedies suggested. I am satisfied that in this way accurate information could be gained, which can be obtained in no other way, that would be of immense benefit to the department.

Inspector A. G. Duncan, of Marksville, reports that as far as he can learn the fisheries of his district are gradually falling off, principally the chief food fishes as whitefish, trout and sturgeon, excepting perhaps in that part of the north channel east of Little Current to Killarney. This is attributed to the capture of immature fish in the small meshed pound-nets. He recommends the prohibition of any net under five inches for a period of five years, the setting apart of certain breeding grounds for whitefish and trout, the prohibition of all netting everywhere between November 1st and April 1st, the obligation under penalty for the fishermen to fertilize the eggs of ripe fish they would find, and plant them on their natural beds. He also urges a fish hatchery at St. Joseph island. There was less poaching by citizens of United States in this district than usual, and the laws were fairly enforced by the local officers.

Most of the catch is exported across the border. Fewer tourists and sportsmen than last year visited our resorts this summer, owing, no doubt to more attraction elsewhere.

Inspector Wm. L. Young, of Selkirk, says that the season of 1904 has been a very unfavourable one both for the companies and fishermen engaged. Stormy weather prevailed throughout the open season, which lasts from the first of June to the fifth of October. During the year a greater number of men were employed consequently more

4-5 EDWARD VII., A. 1905

nets, &c., were used. This under favourable conditions, should have given a yield beyond all records.

Not having received any returns on the yield of the fisheries for the year 1904, I am unable to give you any reliable data. But I hope the aggregate yield will equal that of last year.

The demand for all kinds of fish was greater than the supply, consequently prices received by the dealers were in advance of those received during the previous year. While there may be a slight falling off in the catch of whitefish and tullibees, the decrease will be more than made up by the increase in the other varieties caught.

While the aggregate number of pounds will not more than equal the preceding year, I expect the value derived from it will exceed the previous one.

NORTH-WEST TERRITORY.

Inspector E. W. Miller, of Qu'Appelle, says the exceptionally stormy weather that prevailed in Assiniboia during the latter part of last winter, followed by a long season of high water which reached higher levels than at any time since 1882, has materially reduced the catch of fish for the year in this part of the district. Long lake has again gained considerably in volume and the catch was fair, the lands around its northern shores have been extensively settled of late and the water in that part of the lake, hitherto almost untouched, are now being fished. In the Qu'Appelle lakes there was in July a remarkable mortality among the tullibee, thousands of fish being thrown up on the shore, this may be attributed to the great amount of waste matter brought down by the flood water. The loss of fish was so great that it will probably affect the catch this winter.

In Southern Alberta, the rod and line fishermen continue desirous to see a revision of the regulation which will permit trout fishing to continue some weeks later in the fall than at present allowed. This year the number of days available for angling has been very limited, and the demand for a longer season deserves consideration. A supply of trout has been placed in the waters of the National Park at Banff this summer, where on account of the large number of visiting fishermen more angling is done than elsewhere.

In the Prince Albert district, the operations have been about normal, there are signs however of a much more extensive fishery this winter. The lakes are all in good condition, the prevention of the big catches formerly made in the spawning season having had very beneficial effects.

At Cumberland, the sturgeon fishery was pressed vigorously through the summer, fish were found plentiful but the experimental trials with pound nets gave but moderate results, compared with the catches by gill nets, a large catch of whitefish was made at Clearwater lake in the winter, but transportation arrangements proved defective and the fishermen lost considerably. This lake has now been reserved for the use of the local bands of Indians. Lack of transport also proved disastrous at Moose lake last winter, though splendid catches of whitefish were made, better arrangements have been effected for this season and good results are expected. The Saskatchewan river has quite subsided from its abnormally high stage of 1902 and 1903 and the fishing in Cedar lake has correspondingly improved. The catch of sturgeon has been very good

SESSIONAL PAPER No. 22

both winter and summer but the buyers claim that profits are small owing to the cost of collection and transport of the fish.

In the Nelson River district much enterprise has been shown in the extension of the sturgeon fishery, fish being bought and collected as far down as below Sepi-Wesk lake this summer. The winter fishery is however now mostly confined to Playgreen lake. The extent of these waters is so great and the number of available fishermen so limited that with the enforcement of a close season there can be no fear of their exhaustion.

Inspector Harrison S. Young, of Edmonton, reports the catch of whitefish in Pigeon lake not so large as in previous years, the Indian fishermen did not fish after new year, all leaving to hunt muskrats, which were very numerous and brought good prices. The lake, however, is in as good a state as ever. A great many new settlers have taken up land at this lake, they are principally Swedes, and are all fishermen. The catch of coarse fish all over the district on south side of Saskatchewan, will show considerable increase. Nearly every lake is now well stocked with pike, pickerel and suckers. Most of the fishing is done with hook and line, and it is impossible to arrive at a correct estimate of quantities killed, but the country is settling fast, and the increase in number of fishermen must mean an increase in the catch. The lakes north of the Saskatchewan are all in a very satisfactory condition.

A considerable catch of whitefish was made by a few fishermen in White Whale lake, and sold to a Winnipeg buyer. Warm weather interfered with the fishing, and a quantity of fish was spoiled for the export trade. The district has been more effectively patrolled than ever before. A number of fishermen were prosecuted and fined for spearing and shutting up creeks, and some nets seized for being of smaller mesh than five inches. Good work was done by the guardian employed, but as nearly every creek is full of fish it would require a small army of guardians to completely stop the illegal killing of coarse fish in the spring.

The warm weather of past fortnight has prevented much fishing being done since opening of season for whitefish on November 16.

BRITISH COLUMBIA.

Inspector C. B. Sword, of New Westminster, reports that the sockeye run on the Fraser river has been the poorest known for several years. The total British Columbia pack of these fish was 72,688 cases against 204,809 cases in 1903. On Puget Sound the total sockeye pack was only 107,943 cases against 151,828 cases in 1903. It will thus be seen that taking together the Fraser river and Puget Sound packs the total is only 180,631 cases against 356,637 in 1903, which was also a poor year and 399,593 in 1900 which is the year corresponding to this in the four year cycle. The northern salmon fisheries show a considerable increase so that the total pack of sockeye for British Columbia amounting to 323,000 cases is only 46,000 cases below that of last year.

The pack of other varieties on the Fraser river was also much smaller than last year 51,163 cases against 243,713 in 1903 so that it is to the northern district that we owe the total of the British Columbia pack for 1904, 458,508 cases is so little below

4-5 EDWARD VII., A. 1905

that of 1903, 473,674 cases. I have not yet been able to get the particulars of salmon put up in other ways and exported fresh, but do not anticipate any falling off in this item.

Halibut, though taken almost wholly in the northern district is landed mainly at Vancouver and Westminster and such as always been included in the returns for 'Fraser River' district. The take this year is about the same as last.

From appearances this year herring is not likely to fall off, but as it has practically just commenced it is too early to speak with certainty.

With regard to other varieties whose products show up to a smaller extent in the returns I have not yet got full enough reports to judge very exactly but expect to have at least as good returns as last year.

Inspector John T. Williams, of Port Essington, submits the following preliminary report of his work and observations in District No 2, Northern British Columbia, for the season 1904.

This season has been a most successful one, both for the cannerymen as well as the fishermen; all the canneries and fisheries were running their full capacity, and 'filled up'; the prices for canned salmon were exceedingly good, and altogether it has been a most satisfactory season.

There has been a decided increase in the revenue in the district, the total number of licenses issued in the district for the season of 1904 was 1,529, producing a revenue of \$16,399; the fines for illegal fishing amounting to the sum of \$1,106. The following are the total packs of canned salmon for the seasons of 1903 and 1904, showing the increase during this season.

Total pack for 1903 was 224,189 cases, and that of 1904, 319,957 cases of salmon.

Our halibut fisheries will probably show an increase of 25 per cent on last year, but I shall go exhaustively into this subject later in my statistical report.

The oulachon which is caught principally by the Indians for food, to manufacture into oil, which is called by the white man 'Hum grease' on account of its obnoxious smell, shows a marked falling off in quantity, the reason for this I will explain; nine tenths of the oulachon are caught by the Indians on the Naas river, which is called the 'home of the oulachon', during the months of March and April, unfortunately for them there was a gale of wind blowing down the Naas river, for eight weeks, just at the time the Indians wanted to proceed up the river, this gale rendered it impossible for them to make their annual trip to the oulachon fishing grounds, consequently the 'small fish' catch was considerably reduced.

I have not obtained the returns in connection with the dry salted dog salmon, for the Japanese market, but the figures will most probably show a considerable improvement on last year, owing to the demand for the Japanese Army; the price has doubled within the last two months.

SESSIONAL PAPER No. 22

One of the officers went to Owekayno lake, Rivers Inlet, for the purpose of examining and reporting on the fisheries in that vicinity. The condition of the fisheries was not nearly so bad as at the head waters of the Skeena, and I now have this matter completely under control.

I am able to report most favourably on the work of the Cruiser *Falcon*, which steamer the department purchased in April last, especially for the fisheries protection service in my district. We made forty seizures during the season, consequently putting a stop to a large amount of illegal fishing. We have a fishing ground of over 1,500 miles in extent to cover, and it is impossible for her to do the work properly, however she has done invaluable work this season among our northern fisheries.

With regard to obstructions natural and otherwise on the Skeena and Naas rivers, and including the different kinds of barricades that the Indians are in the habit of building on the creeks in our northern waters; I consider this a most important matter in connection with the conservation of our fisheries in our waters.

It is clear that if we protect the salmon on their natural spawning grounds, thereby assisting nature in her work of propagation we are helping a system of natural propagation that will discount cent per cent anything that we can possibly do in the manner of artificial culture. With reference to natural obstruction, I may say, that there are several rocks, boulders and timber jams on our different spawning creeks at head waters of the Skeena and Naas rivers, and the removal of these is of paramount importance. Thousands of salmon can be seen swimming around at the base of these obstructions, vainly attempting to ascend, and in most cases only the strongest fish can make the ascent. The remainder die at the bottom of the falls or are dashed to pieces bruised and bleeding against the sharp rocks.

With regard to the artificial barricades this matter is easier and less costly to deal with. The Indians are the principal offenders as they build barricades for the purpose of detaining the salmon longer in the salt water, so that they can catch them with their seines, supplied them by the canneries for this purpose. This applies to the southern portion of the district.

At the northern part at the head waters of the Skeena and Babine lake they are caught with the barricades, for the sole purpose of being sold to the different tribes of Indians in the interior and also to the minors and those who keep stores in the neighbourhood.

Mention should be made of our deep sea fisheries; and the almost boundless possibilities that lie open for commercial enterprise in this direction, there is an almost inexhaustible supply of all kinds of deep sea fishes, this I consider a grand opportunity for a profitable investment for our local capitalists. Our halibut fisheries are practically intact up to the present time, the herring fisheries untouched, and the cod, oulachon and dog salmon are in countless quantities. Even the whaling industry has apparently been entirely overlooked, although they are to be seen in immense numbers all over our northern waters.

FISHERIES PROTECTION SERVICE.

The report of the Fisheries Protection Service for the season of 1904 forms appendix 13 of this publication.

With the exception of a slight collision between the cruiser *Constance* and a foreign schooner near St. John harbour, the whole season passed without accidents and in a satisfactory manner.

The fleet consisted of following cruisers: *La Canadienne*, *Curlew*, *Osprey*, *Kingfisher*, *Constance*, *Kestrel* and *Petrel*, and four steam launches doing patrol work. Two new cruisers were added to the fleet this fall, the *Canada* and the *Vigilant*.

Eighty United States fishing vessels took advantage of the *modus vivendi* licenses and the amount of fees received therefrom was \$9,205.

The long list of 270 United States vessels using our ports during last year demonstrates the importance that our harbours and ports are to them.

FISHERIES INTELLIGENCE BUREAU.

Detailed reports from the different stations dispersed on our Atlantic coast re the movements and captures of sea fishes will conclude appendix 13. They are prepared by officer MacKerrow of the Halifax agency.

THE BEHRING SEA QUESTION AND PELAGIC SEALING.

There has been no change in the diplomatic phase of this question; and the Paris Award Regulations of 1893, as ratified by Imperial legislation still continue to control the operations of British sealers on the high seas in that part of the North Pacific ocean, inclusive of the Behring sea situated to the north of the 35th degree of North latitude and eastward of the 180th degree of longitude till it strikes the water boundary of the Treaty of 1867 between United States and Russia.

The fleet which cleared from Victoria, for the sealing season of 1904, numbered 23 vessels, or one less than last year, representing an aggregate tonnage of 1,615 tons register, with crews comprising 212 white men, and 332 Indians employing 60 boats and 161 canoes.

This fleet of vessels so distributed their sealing operations at different times during the season that nineteen of them participated in the North American Coast fishery, against twenty-one in 1903, seventeen in the Behring sea fishery against nineteen in 1903, and six in the fishery in the vicinity of the Russian Seal islands off Kamtschatka being the same number as in 1903.

Although twenty-three vessels cleared for sealing, but twenty-one returned with catches, the *Penelope* having been wrecked on the way out and the *Triumph* is reported missing and given up for lost.

SESSIONAL PAPER No. 22

The catch of these twenty-one vessels is summarized as follows :—

North American coast catch.....	3,118
Behring sea catch.....	8,237
Catch in vicinity, Russian Islands.....	1,790
	<hr/>
Total.....	13,145

Add to this the catch of the Indians along the inshores of British Columbia amounting to 1,501 skins and the total yield of the fur seal fishery by Canadians on the North Pacific ocean during 1904 aggregates 14,646 seal skins against 14,701 for the year 1903, a decrease of only fifty-five skins, although the number of vessels employed fell short by three of the fleet employed the year previous.

Some years ago the United States authorities adopted the plan of branding with hot irons young female seals before their return to the ocean from the islands. Such an expedient can have two effects at least, that of identifying the seals caught by the pelagic sealers and of decreasing the value of the skin taken if so treated. It is interesting to note however, that out of the 14,646 skins taken this year only seventeen branded skins, are reported by the sealers.

Last year's report referred to the extension by Canadian vessels of sealing operations in the South Atlantic ocean, principally in the vicinity of the Falkland islands, but up to the present time no information has been received as to the result of this branch of the business for the season just ended.

In this connection the department has recently learned of the seizure and detention of the Halifax sealing schooner *Agnes G. Donohoe* at Monte Video, by the authorities of the Uruguayan government. The exact offence for which this vessel is detained and the laws under which subsequent proceedings are to take place are left in some obscurity up to the date of the information covered by this report ; but every possible means is being exhausted by His Majesty's government through the British representative there to conserve the interests of His Majesty's Canadian subjects affected, and to bring about as speedy and satisfactory a settlement of the incident as is possible under the circumstances.

HUDSON BAY EXPEDITION.

The report of last Hudson Bay Expedition by Mr. A. P. Low, officer in charge, forms appendix 12 of this department's report (Marine Branch).

The *ss. Neptune* left Halifax on August 23, 1903, reaching Port Burwell on September 1. After exploring these northern seas for one year and fifty days, the *Neptune* returned safely on October 11 last, having surveyed over two thousand miles and navigated nearly eleven thousand miles, often under great difficulties.

Mr. Andrew Halkett, an officer of this department, who accompanied the expedition as naturalist, sends the following preliminary report upon the animal life there, as observed by him.

Mammals.

The mammals observed were limited to the four orders, the carnivora, the rodentia, the ruminantia, and the cetacea ; and embrace the Atlantic Walrus (*Odobenus rosmarus*), the Ringed Seal (*Pagomys foetidus*), the Harp Seal (*Pagophilus groenlandicus*), the Hooded Seal (*Cystophora cristata*), the Polar Bear (*Thalartos maritimus*), the Barren-ground wolf (*Canis albus*), the Esquimo Dog (*Canis familiaris borealis*), the Arctic Fox (*Vulpes lagopus*), the Polar Hare (*Lepus arcticus*), certain small rodents, such as Marmots and Lemmings, the Musk Ox (*Oribos moschatus*), the Barren Ground Caribou (*Rangifer arcticus*), the Right Whale (*Balena mysticetus*), and the Beluga or White Whale (*Delphinapterus catodon*).

Specimens of the skins of several of the mammals, suitable for mounting, were preserved, with a series of skulls, bones, teeth, &c.

Birds.

The skins of about thirty species of birds, embracing over one hundred specimens, were preserved ; these include, among others, the Lapland Longspur (*Calcarius lapponicus*), the Snow Bunting (*Passerina nivalis*), the Red Poll (*Acanthis linaria*), the American Raven (*Corvus corax principalis*), the Horned or Shore Lark (*Otocoris alpestris*), birds of prey, various shore birds, including the Red Phalarope (*Crymophilus fulicarius*), the Whistling Swan (*Olor columbianus*), Hutchin's Goose (*Branta canadensis hutchinsii*), the Snow Goose or Wavy (*Chen hyperborea*), the Eider Duck (*Somateria mollissima*), the King Eider (*S. spectabilis*), the Long-tailed Duck or Sou-wester (*Harelda hyemalis*), the Arctic Tern (*Sterna paradisica*), various gulls (*Larida*), Jaegers (*Stercorarius*), the Murre or Brunnich's Guillemot (*Uria lomvia*), the Sea Pigeon (*Cepphus mandti*), the Red-throated Diver (*Urinator lumme*), and the Black-throated Diver (*U. arcticus*).

Numerous birds' eggs, some of them in sets, a series of birds' nests and avian anatomical preparations were also collected.

Various other species of birds were observed, such as the American Titlark (*Anthus pensilvanicus*), the Rock Ptarmigan (*Lagopus rupestris*), and the Dovekie (*Alle alle*).

Fishes.

The fishes observed, or collected, were various Salmonoids and Codfish (*Gadus calarius*), together with a specimen each, of *Lycodes* and *Gymnelis* (dredged), two specimens each, of two species of Blennioids (dredged), a Sand-lance (*Ammodytes*). Cottoids or Sculpins, a species of fresh water Stickleback (*Pygosteus*) and a Basking Shark (*Somniosus microcephalus*).

Insects.

Among the insects collected were two species of humble or bumble bees (*Bombus*) : Dipterons, chiefly of the families Culicidæ, Cetridæ, and Muscidæ, including the large larvæ of a fly which infest the flesh of the caribou : caterpillars and diurnal moths : several species of beetles (including aquatic kinds) ; the larvæ of Caddis Flies (Phryganids) ; and a curiously modified louse, found on a walrus, and on a seal.

SESSIONAL PAPER No. 22

Spiders of different kinds and sizes, and other Arachnids were found.

Numerous Marine Invertebrates were dredged, or otherwise obtained, and embrace ; Ascidians, Crustaceans, Mollusks, Polyzoans, Annelids, Echinoderms, and Coelenterates.

CONCLUSION.

The Dominion fisheries extending, as they do over so vast an area and including seas, rivers, and lakes, varying in every physical feature, yield the most varied food products, and afford a field for almost every possible fishery enterprise.

In addition to their importance from the commercial point of view and as a source of food for farmers, settlers, prospectors and residents in the most remote regions, they have a value not to be over estimated for angling and sport generally. Hence the necessity for conserving the fisheries for all these various important purposes.

It will be seen from the foregoing pages that steps are being taken to protect the fisheries of Canada and to prevent, where possible, any depletion of its waters. The great interests at stake are constantly kept in view by the department, whilst at the same time all is being done that can be to encourage and foster a desire in fishermen and others engaged in the industry of fishing to assist in properly maintaining regulations that will preserve our great heritage.

I have the honour to be, sir,

Your obedient servant,

F. GOURDEAU, Lt. Col.,
Deputy Minister of Marine and Fisheries.

SPECIAL
APPENDED REPORTS

BY

PROFESSOR E. E. PRINCE

Dominion Commissioner of Fisheries

I. CANADIAN STURGEON AND CAVIARE INDUSTRIES.

II. METHODS OF COARSE FISH EXTERMINATION.

III. THE SCOTTISH HERRING CURING EXPERIMENT IN CANADA.

By MR. JOHN S. COWIE, Lossiemouth, Scotland.

(With Prefatory Note by Professor PRINCE.)

1904

SPECIAL APPENDED REPORTS

I.

THE CANADIAN STURGEON AND CAVIARE INDUSTRIES.

By PROFESSOR E. E. PRINCE, DOMINION COMMISSIONER OF FISHERIES, OTTAWA.

Few people realize the value and importance of the sturgeon industry of Canada. It has been said on high authority that of caviare, one of the most valuable sturgeon products, Canada contributes 75 per cent of the world's supply. Certainly the assertion that almost every Canadian river emptying into the Atlantic and Pacific oceans is a salmon river, may be extended in the case of the sturgeon, and it may be said of the principal inland waters of the Dominion, as well as the rivers on either seaboard, that they are inhabited by sturgeon. The Russian sturgeon fisheries, especially the caviare industry, has long been accorded the premier place, but when it is remembered that of the three and a half million square miles superficial area of Canada, 627,530 square miles are water, and that it includes half the fresh-water upon the surface of the globe, it need cause no surprise that the sturgeon is a species of fish occurring widely and abundantly in Canada.

DISTRIBUTION OF CANADIAN STURGEON.

The group of fishes known as the sturgeons, the Chondrostea, includes over twenty different species, and of these seven or eight occur in North America, and four or five have been recorded in Canada, one, viz., the paddle-nosed sturgeon (belonging to the family Spatularidae) has been captured in Lake Huron and Erie waters only four or five times; while the huge white sturgeon, *Acipenser transmontanus*, is confined to the Pacific waters, the much smaller lake sturgeon (*A. rubicundus*) is distributed through the lakes of Ontario and Manitoba, and is found more or less plentifully in the waters of the North-west and the Hudson Bay basin, the common sturgeon (*A. sturio*) occurs often far inland; not always where access to the sea is possible. Other species of the family Sturionidae have been recorded in Canada; but they are uncommon and of no commercial importance. From the St. John river, in New Brunswick, at one time noted for its abundance of fine sturgeon, up to and including the River St. Lawrence and its tributaries, most of the rivers have yielded more or less sturgeon, and even as far north as Hudson Bay the sturgeon has been captured from time immemorial. I have myself, within the last four or five years, handled fine specimens of this fish from the St. John river, N.B., and indeed made a careful study of the food of the sturgeon from specimens studied on the banks of the river, of which I gave an account in the department's 31st Annual (Fisheries) Report, 1898. Dr. Robert Bell, head of the Geological Survey of Canada, most kindly gave me for determination a specimen of a sturgeon from the waters near York Factory, Hudson Bay. I gave a detailed account of this and of a number of other Hudson Bay fishes in a paper read in Section D. (Zoology) of the British Association when the great scientific body met in Toronto in 1897. I pointed out that as the specimen was very young, its diagnosis was less certain than would be the case in a more mature specimen, for in its external features the sturgeon undergoes marked changes

4-5 EDWARD VII., A. 1905

as it grows. The snout in the young is more lengthened and slender, the body more angular and attenuated, and the rows of enamel plates and spines are more projecting, proportionately larger, and the tooth-projection more hooked than in the adult. The small specimen showed 16 plates dorsally, 35 laterally on each side, and 35 or 36 ventrally, numbers which do not agree with the common species, but in which great variation introduces a large element of uncertainty.

GREAT LAKE STURGEON.

The great lakes have in times past furnished vast quantities of sturgeon, and Lake of the Woods, in the extreme western portion of Ontario, is remarkable even amongst Canadian lakes for the incredible quantities of sturgeon, of the very finest quality, which it has supplied to the markets. Lake Winnipeg, Lac du Bonnet and tributary waters (in Manitoba), are inhabited by sturgeon, but curiously enough the lakes immediately to the west (Lakes Manitoba and Winnipegosis) are either destitute of these fish or they are very scarce; but the lakes further north and west, Cedar, Cumberland, Moose, Reindeer, &c., and the great Saskatchewan, the Nelson, Hays river and others that might be named, teem with this valuable species. Further west again sturgeon appear to be absent, both east and west of the Rocky Mountains; but as the Pacific coast is approached a gigantic species is encountered (*Acipenser transmontanus*) which not uncommonly reaches 400 to 500 pounds weight, or even 800 pounds or 900 pounds; indeed, I myself, in 1894, saw some huge specimens whose heads after decapitation were almost as large as the head of a bullock, and whose weight, I was informed, ranged from 1,100 pounds to 1,200 pounds.* In the more eastern waters of Canada, sturgeon of 60 to 100 pounds are common, but examples have been taken weighing 160 pounds to 190 pounds. In former times the sturgeon was mainly utilized by the Indians and in the more remote regions, this fish for a considerable portion of the year, was the main food upon which they could rely. There was practically no demand for sturgeon as a white man's food. It is true that twenty-five years ago, there was a demand for sturgeon on the St. John river, N.B., but the fishery was stimulated practically by one or two New York firms, who wished to supply certain sturgeon products to Germany, Russia, &c., and as stated further on in this report, the fishery lasted only a few years, and was of a sporadic, and from a Canadian point of view, unimportant nature. As a rule, the sturgeon was regarded by the fishermen with disfavour, and any captured in salmon, shad, whitefish, or pickerel (doré) nets were thrown out on the beach, or placed on the land for fertilizing purposes.

RECENT GROWTH OF FISHERY.

Within the last 10 or 12 years only has the sturgeon been regarded as having any substantial value in Canada. First commercially utilized on the St. John river, N.B., in 1880, the fishery was later developed on the great lakes, and in Lake Huron assumed extensive proportions, though it was on Lake of the Woods that the industry developed not only with rapidity, but to a high commercial value, so that eight or nine years ago the sturgeon fishery on the last-named lake was claimed to be one of the most valuable in the world. In Lake Winnipeg and the Manitoba waters, the fishing firms later turned special attention to the industry, and in 1895 it had become important, while a year or two later the Fraser river in British Columbia and the Pacific waters of Canada were being fished extensively for sturgeon. Only within the last two or three years have the more northerly waters been exploited, and at this moment fishing firms in Canada (urged, no doubt, by U. S. buyers) are making every effort to utilize the sturgeon, which it is generally conceded the Canadian western and northern waters

*The newspaper statement that a Columbia river sturgeon of 848 lbs. weight is the largest Pacific sturgeon known is, of course, an error.

SESSIONAL PAPER No. 22

inhabit. It is, however, only too true that vast virgin waters in which sturgeon doubtless occur, have not yet been touched, and the value of these fish is not understood or realized. One recent authority affirms that Canadians are at last waking up to the value of the sturgeon fisheries, which they have for so long permitted to be ruthlessly despoiled. For many years any implement of capture could be employed. The result has been that while a few years ago the fish were so plentiful as to be practically of no market value, they have now decreased so rapidly that they have become the highest priced of our commercial fishes.

FUTURE DEVELOPMENT OF INDUSTRY.

It is fully ten years ago since I publicly expressed my opinion when officially inspecting Lake Winnipeg, at a time when the sturgeon industry was little developed, that the industry had great possibilities before it in the west. On my many visits to these waters my views have been confirmed, but, it was on one of my earliest trips (in 1895) when I made some observations which a local newspaper reported as follows:—

‘The representatives of the various companies have pressed the Commissioner of Fisheries for an earlier season for sturgeon, and also the permission to adopt other methods of fishing than the gill net, which at present the regulations alone allow.

The commissioner was very much impressed with the character of the whitefish which are prepared for the United States market in a manner which much enhances their value. Immediately after being taken from the nets they are cleaned and at once undergo the cold storage process. The fish are then sent to the United States market in splendid condition.

He was also greatly interested in the sturgeon industry. The Lake Winnipeg sturgeon, he thinks, takes premier place in the market on account of their rich edible qualities. Samples of fresh sturgeon were shown Mr. Prince and he did not hesitate to pronounce them superior to anything else he had seen from other waters.

With due protection, the commissioner predicts a great future for the Manitoba sturgeon fisheries, though no fish is so easily depleted by reckless methods, as the exhausted United States sturgeon fisheries demonstrate. The preparation of caviare is yet in its infancy and there is no manufacture of isinglass, one of the most valuable products of the sturgeon. From the commissioner’s visit to the lake and from his conference with the representatives of the leading fish companies he was convinced that the Lake Winnipeg fisheries are capable of vast development and in the future are certain to be of immensely increased value.’—(*Daily Nor’Wester*, Sept. 15, 1895.)

During the last two or three years applications received at Ottawa have been very numerous from parties wishing to develop fishing industries in the more remote waters of Canada. These may abound in whitefish, trout, excellent pike or jackfish, and doré or pickerel, yet almost without exception the object of applicants is to embark in the sturgeon fishery. ‘Now what I want is to get a few sturgeon this summer in order that I can be in a position to pay as high a price for fish of all kinds as the established fishing companies’ is the statement of one of the applicants, though in most cases the capture of sturgeon is not very prominently mentioned. There is indeed no fish, apart from the salmon, which there is such eagerness to capture as the sturgeon in Canada. Yet a few years ago an authority like Dr. M. H. Perley could say of this fish only that it is taken in New Brunswick and Nova Scotia waters of a length of two to eight feet, in weirs, seines and gaspereau nets, to the last of which it is very destructive....The flesh is like coarse beef, quite firm and compact, but rank and unsavoury. The Indians cut it up in large pieces and salt it for winter use; it is only eaten by those who can obtain no better fare. The flesh of a young sturgeon is much more delicate than that of an old one; when stewed with rich gravy its flavour is not unlike that of veal.’ (Fisheries of New Brunswick, 1852). Mr. T. F. Knight

4-5 EDWARD VII., A. 1905

speaks in similar terms of its food qualities in his Fisheries of Nova Scotia (Halifax, 1866), saying that it 'is found in the harbours of the Atlantic coast and in the Bay of Fundy. It prefers soft and muddy bottoms. It spawns in fresh water, before leaving it in the autumn, to return to sea.'

GREAT VALUE OF PRODUCTS STIMULATES THE FISHERY.

What are the reasons of the increased importance of the sturgeon in Canada? The reasons are that, apart from the flesh, which has some market value, the sturgeon yields certain very valuable and important products. These named in the order of their commercial estimation are (1) caviare, (2) isinglass, the product of the swim bladder, (3) the flesh salted, smoked, or otherwise prepared, (4) oil which is of great value in the leather industry, (5) fertilizer, made from the entrails and scrap, (6) the soft gristly backbone with its sheath which prepared is called *wesiga* and all over Russia is an esteemed article of diet, (7) the brain and nerve cord removed from the gristle when smoked and dried is considered a great delicacy in China, (8) the back portion of the sturgeon or dorsal region is made into *balyki* a preparation in which women are extensively employed (it is stated) in Astrakan, (9) the ventral part or belly of the fish is made also into a food product called *pupki*, (10) a valuable fish glue, differing from the isinglass of the swim-bladder, is made from the nose, fins, tail, &c., and lastly (11) leather has been made from the tough and dense skin of the sturgeon. Mill belts and boot laces are made of sturgeon leather.

SMALL VALUE FORMERLY OF STURGEON EGGS.

It will be seen that most of these numerous products are yielded not by the flesh, which is practically the only portion usually utilized in marketable fishes, with few exceptions; but by the waste materials or what is usually termed 'offal.' The spawn, for instance, is not regarded as of much value in edible fishes generally (e. g. the halibut, the salmon, &c.,) but in the sturgeon it has a value much greater than the flesh or other parts of the fish. So little was this value of the roe or spawn realized in Canada that for many years the sturgeon was fished mainly for the flesh, and I have before me a contract, made about nine years ago, in which a Canadian fisherman binds himself to supply all the sturgeon he captures to an American agent who agrees to pay him 10 cents per pound for the meat, but the waste (the roe, swim-bladder, &c.) were to be carefully kept and handed over for nothing. The waste referred to was at the time valued at 30 cents to 40 cents per pound (it is now 75 cents per pound) while the flesh was then worth at the outside 10 cents per lb. and is indeed now not more than 6 cents to 10 cents per lb.

In some localities the great value of the sturgeon was, however, recognized and in the Dominion Fishery Officer's report for St. Clair river, so long ago as 1884, the following interesting statement occurs:

'The large catch of sturgeon is worthy of notice. Some years ago these fish were considered as worthless, and even deemed a nuisance. They are now reckoned amongst the most valuable kinds of fish frequenting the waters of Ontario. When sold round, fishermen easily obtain 60 cents per fish. When dressed, nothing is lost; the flesh sells at 4 or 5 cents a pound; the prepared eggs or caviare fetch 10 cents a pound; bladders 5 cents each. Valuable oil is also extracted from the offals, and the skin is now used for mill-belt laces. Experiments have shown that a set of sturgeon leather laces will last as long as the belt itself.'

It is no doubt owing to the nearness of the great Detroit fish-markets that the Canadian fishermen in the adjacent localities had the value of the sturgeon forced upon their attention, though the price, 10 cents per pound, for the caviare was, of course, a wholly inadequate rate for that valuable product twenty years ago.

SESSIONAL PAPER No. 22

AMOUNT OF CAVIARE YIELDED BY STURGEON.

The amount of eggs or caviare, as as they are called when properly prepared, varies very much in different sturgeon. A Lake Erie sturgeon may yield two or three gallons up to six to twelve gallons, according to size of the fish. This quantity implies very great reproductive capacity. If ten gallons be taken as an average yield per fish, that would mean a total of one million to two or three million eggs per fish, as there are 160,000 to 200,000 eggs to a gallon measure of sturgeon spawn. A lake sturgeon of 190 pounds weight contains 40 pounds of roe, which brings to the fisherman nearly \$50. A sea sturgeon secured at Pennsville, New Jersey, U.S., weighing 300 pounds, produced half a keg of caviare (over 60 pounds), valued at about \$60, and a Pacific sturgeon weighing 255 pounds gross, brought to the Trescott freezer, Astoria, Oregon, yielded about 50 pounds of caviare. It is not by any means the case that the huge sturgeon, 800 or 1,000 pounds weight, yield caviare in quantity proportionate to the size, and as a rule in these monstrous fish the roe is of inferior quality. We know that in the Volga (Russia) sturgeon have been asserted to reach a length of 25 feet; but that must be an exaggeration, as a reliable authority tells us the Russian sturgeon usually range in weight from 100 pounds to 460 pounds. In Norway there are records of sturgeon 1,000 pounds weight, but the monstrous *Acipenser huso* of Southern Russia, Professor Arthur Thomson states, may weigh nearly 3,000 pounds. The best Russian caviare is furnished by the sterlet (*A. ruthenus*), which is a comparatively small kind of sturgeon. It may be added that the small shovel-nose sturgeon (*Scaphirhynchus*) of the Mississippi valley and the Middle States is valued for its excellent caviare, while the flesh also is in demand. The fish rarely exceeds 40 to 50 inches, though examples of seven and eight feet have been reported. The paddle-nosed sturgeon of the Mississippi waters has recently become commercially valuable owing to the good quality of the caviare made from its greenish-black ova, but the flesh is not valued excepting by coloured people. It ranges in size from 3½ to 5 or 6 feet, and of a weight of 40 to 140 pounds. A fine specimen from the Lake Superior waters, examined by myself, measured 5 feet 4 inches in length and weighed over 100 pounds. I gave an account of this fish at the time of its capture, as it is of extremely rare occurrence in Canada.*

STURGEON FISHED WHEN MIGRATING.

The sturgeon are usually caught when migrating to their spawning grounds either from one part of a great inland lake or river to another, or from the sea to the upper waters far above tidal limits. They move in great schools, so that quantities can be secured if the precise route taken by them be discovered. In Russia they seem to occur in incredible quantities. Indeed, one writer describes as follows the remarkable abundance of sturgeon and the great captures made, when they swim up the Volga from the sea : It is evident that they must be caught in vast numbers, and such is the case. The great fish, weighing from 100 pounds to 460 pounds, and averaging from 5 inches to 25 feet in length, rush into the Volga at certain seasons in such quantities that a million and a half have been killed in a single season. During these migrations the scene is often a curious one. The people, far and wide, are excited at the prospect, and rush to the stream with various weapons of offence, but so vast are the numbers of fish that nothing deters them. At Rubbinsk the river is quite narrow, being about 350 feet in width and 28 feet in depth, and here, some years ago, during an unprecedented run of fish, a most remarkable scene was witnessed. The entire country round about was aroused, and so alarmed were the fish in the river below that they moved up towards Rubbinsk in a solid mass, like a great wave ; as the space grew narrower they became more compressed, and finally, at the town mentioned, the river

*See Ottawa Nat., vol. xiii., p. 153 (Oct., 1899).

was fairly blocked with them, and up and down the stream for a considerable distance there was an actual bridge of sturgeon, their bodies forced out of water, while many, by the squeezing process, were thrust entirely out upon the backs of the others. In fact, the Volga was bridged with fish, and excited fishermen, armed with clubs and spears, dashed upon the monsters, standing on their backs and jumping from one struggling fish to another; now with one foot on one and one on another. Men, women and children walked upon fish, and dragged them to the shore as fast as they could, while the fishermen, standing amid the struggling mass, killed hundreds. This curious warfare continued for several hours, but finally the dam was broken, and the great mass of fish surged ahead and continued the migration, leaving hundreds of dead and wounded behind.

In the Fraser river the sturgeon, until five or six years ago, passed up from the sea, not only in numbers, but of incredibly great size, their destination being such lakes at Pitt lake, fifty miles from the mouth of the river, where they were taken in June and for a few months later. In the Atlantic rivers they also migrate up from the sea in June and July; but in inland waters like Lake Winnipeg or the great lakes of Ontario they could be taken as early as May or even April. In tidal waters they are taken usually by gill-nets in Canada, these being floated across the river two or three hours before slack, and usually taken up at slack water.

MODES OF CAPTURE.

The fish seem to grope along near the bottom, evidently feeding on edible matter lying there, sucking it up with their funnel-like toothless mouth, and feeling about with the long fleshy beards or barbels hanging down from the under surface of the head, in front of the mouth. The monstrous sturgeon in the Fraser river were found to burst through the ordinary strong twine used by the net-makers, hence I recommended strong cord, or rather rope, and a larger mesh of more than 12 inches. My advice was followed, and the fish were taken more successfully. In the Red river, Manitoba, and in other waters, baited hooks were used.* These lay on the bottom and the fish were readily hooked; but a very cruel and wasteful method of fishing has been tried in Canada, until forbidden by law, and is still adopted very generally in the United States, viz., bare grapnels or rows of sharp unbaited hooks laid on the bottom. As one well known United States authority observes:—

The method of taking sturgeon with set lines is generally and justly considered very destructive and cruel. It probably originated in China, and was for many years extensively practised by the Chinese fishermen of California. Recently, however, the use of set lines by the Chinese has been interdicted.

One of the features of the method which makes it especially harmful is the destruction of immature fish. Very large quantities of sturgeon only 15 or 18 inches long are often seen in the markets. The sacrifice of small sturgeon is said, however, to be unavoidable, as the fish that are snagged by the hooks are injured so severely that even if liberated alive most of them would soon die.

In the Sacramento, San Joaquin and other United States rivers, large-meshed gill-nets are used; but in 1893 bare grapnels were introduced, and were adopted generally on account of their effectiveness. Fish traps or pound-nets usually secure a good many sturgeon, especially in the spring. The sturgeon captured then, as indeed they are generally in the Russian and other fisheries, are found to contain most spawn, as the sturgeon appears to spawn mostly in early summer.

STURGEON FISHERIES SOON DEPLETED.

No fishery is so easily exhausted by reckless, unrestricted fishing, and the wasteful bare hooks or set lines of grapnels have, wherever used, depleted the sturgeon. As

* 'I was surprised' says Inspector W. S. Young in 1902 'to see sturgeon caught by hook and line by the Indians who make very successful catches,' in the Winnipeg river.

SESSIONAL PAPER No. 22

an example of the extensive efforts to destroy sturgeon, I may mention that one Canadian officer reported to me that in the St. Clair waters, between Lakes Erie and Huron, he had in 1894 seized and destroyed 30 miles of set lines with about 100,000 huge bare grapnel hooks attached for illegally taking sturgeon. The rapid decline and extinction of sturgeon fisheries can be instanced in several notable cases in Canada. Thus the St. John river is described by all writers upon New Brunswick to have abounded with sturgeon forty or fifty years ago. The Indians speared them for their own use, and parties canoeing up the river were constantly startled by the jumping of huge sturgeon, which fell back into the water with a resounding splash. In 1880 some United States fish buyers urged the Canadian fishermen to capture for them all the sturgeon possible. The firm had by their extensive operations very seriously reduced the supply of sturgeon in the waters of Florida, and within five years of their arrival on the Canadian river the fish were cleared out of the St. John river. Only drift-nets were used; but the quantity obtained fell from 602,500 pounds in 1880 to 16,264 pounds in 1886. The largest fish brought 30 cents to 50 cents each, as the fishermen did not realize their value, and though a close season for seven or eight years was instituted the fish have continued scarce. Some of the sturgeon were 60 to 100 pounds weight, and the United States buyers smoked the flesh for the New York market, converted the eggs into caviare, and boiled out the oil from the refuse, so that the catches were thoroughly and profitably utilized. Similarly, the Fraser river sturgeon were cleaned out in a period of five or six years, as the industry brought to the fishermen in 1897 no less than \$67,000, but a few years later the value had fallen to \$3,350 (in 1902).

Lake of the Woods, in western Ontario, is in many respects the most remarkable sturgeon habitat in North America. The lake is 1,500 square miles in area. Canadian regulations enforced over the greater part of the lake and on Rainy river would have permanently preserved the sturgeon and the fishing industry; but a very small corner of the lake falls within the United States border, and there the most unsparing and unrestricted destruction of sturgeon was carried on, with the result that whereas in 1894 no less than 1,059,267 pounds were sent into the market from the United States nets, five years later (1899) the catch was only 197,033 pounds. In the Canadian portion 162,760 pounds, valued at \$9,780, were recorded in 1894, which had fallen in 1902 to about 46,000 pounds (of which 1,853 pounds was caviare), and of a total value of only about \$3,600. The New York *Fishing Gazette*, in June, 1896, made the following interesting reference to the growth and importance of the Lake of the Woods sturgeon fisheries. Quoting from the *Winnipeg Colonist*, it said:—

‘Next to lumbering, probably fishing is the industry that up to the present has been of most benefit to the towns of the Lake of the Woods. In a quiet, unobtrusive way a very large amount of business is done, in particular in that aristocratic luxury, caviare. It may possibly surprise many a resident of the place itself to hear that the Lake of the Woods practically controls the world’s market for this delicacy. It is estimated, indeed, that the Lake of the Woods produces 75 per cent of the caviare supply of the world. Consequently, it will be understood that the sturgeon is the fish that most attention is paid to, though there are a great many whitefish, bass, pickerel, and other fish caught and sold. The total catch for the season 1896 is estimated at 5,000,000 pounds, a large part of which would be sturgeon, from which 190,000 pounds of caviare was made. The business is divided between Canadian and American companies, though Rat Portage is the headquarters for all. The American companies operating are the Lake of the Woods Co-operative Company and the Lake of the Woods Fish Company, while the chief of the Canadian companies are the Rat Portage Fish Company, the Norman Fish Company, E. W. Brydges and Captain Hooper. There are engaged in the industry altogether fourteen steamboats and fifteen barges, besides a very large number of so-called pound-boats. It is estimated that the work gives employment to fully 500 men, and that the amount of money brought to Rat Portage through the industry last year was about \$200,000.

From the sturgeon, besides caviare, another valuable product is obtained, namely, isinglass, which 'is taken from the bladder. The caviare is treated mostly in Germany at present, but the amount treated and put up in Canada and the United States is increasing every year.'

I have above made several references to the St. John sturgeon fishery and its rapid decline after a brief period of prosperity. The case is so typical, that I venture to quote from the fisheries reports issued at the time. Thus in 1881 the New Brunswick inspector reported:—

'During the last summer a new industry has been developed on the St. John river. Several Germans came from New York in the month of June, and engaged in the capture of sturgeons, which are plentiful in the St. John, but have never previously been turned to any profitable use. These foreigners brought several nets with them, but had their boats built on the river, under their instructions, by resident workmen. They also employed resident fishermen on the river to work these boats and nets, and paid them one dollar each for all the sturgeons they caught. The following is a brief description of the mode of catching and handling this fish.

'The boats are large flat-bottomed affairs, roughly made of thin planks, but well adapted for their purpose. The nets are made of strong cotton cord, about $12\frac{1}{2}$ inches in the mesh, from 40 to 60 yards long, and 15 to 20 feet deep. They are operated by drifting, each net attended by a boat and two men. Fishing commences at dark and continues until daylight. Sometimes as many as 20 fish are taken in a night by one boat; but more commonly about 5 to 8 per boat. In the morning the fish are taken to a floating platform attached to the shore. The heads and tails are cut off; the entrails removed; the skin taken off; the back bone cut out, and the two sides of the fish are packed in ice in large boxes and exported to New York, where the flesh is smoked by small dealers for immediate consumption.'

But in 1884 the effects of unwise over-fishing were apparent, and the inspector had the unwelcome duty of saying: 'The great decrease in the catch of this fish which I have had to report for several years past has, this year, been still more marked. The catch is not more than half that of last year, which showed an equal decrease, as compared with the year preceding. Those engaged in the business have hitherto attributed this falling off to high freshets and unfavourable weather; but the experience of this year points to a different solution of the trouble. The opinion expressed in my last report would seem to be borne out by the result of this season's fishing. I never believed the stock in the river would stand the excessive fishing which followed the commencement of the business, still there were some peculiarities in this season's experience, which are not easily explained, in my present knowledge of the habits of this fish. The principal of these is the fact that very few small fish were taken; most of the season's catch consisted of large fish, and it would seem as if the smaller fish were not in the river. Why they did not come as formerly I am at a loss to explain, and I have little faith in theories unsupported by facts. The most marked feature in a failing fishery is the scarcity of large fish and the preponderance of small ones. But this rule seems to have been reversed this year, and though the numbers taken have diminished, the size has increased. I am informed that a movement is on foot to obtain the removal of the tax on nets, on the ground that fishing is so poor. From my point of view, this is the strongest reason for continuing it; for no hope of improvement can reasonably be entertained until the excessive fishing that has hitherto been pursued is much reduced. But as past experience has shown that this fishery cannot be commenced earlier than the second week in June, in consequence of spring freshets, which do not subside much earlier than that date, the fishing season might be extended to September 15, without injury, as it is now pretty certain that this fish spawns all through the summer months.'

In the following year, 1885, Fishery Overseer Hetherington, in his report for Queen's county, N.B., said: 'Not a single sturgeon was caught in the Washademoak, where formerly they were most abundant, and where, in fact the fishery commenced';

SESSIONAL PAPER No. 22

while a neighbouring officer in King's county, N.B., said: 'The sturgeon fishery this year was confined entirely to King's county, and the catch has fallen into insignificance, being only 26,000 pounds. The catch in 1880 was 602,500 pounds.' The same melancholy story is repeated in all sturgeon fishery enterprises on this continent. The effort has always been to operate unsparingly, give the fish no chance, and kill the industry with all speed. A recent New York State report graphically records the decline in those waters:—

'The sturgeon fishery shows a remarkable falling off, the value of the product decreasing from \$46,573 in 1898 to \$8,323 in 1901. This fish is now very scarce, not only in Hudson river, but also along the south side of Long island, where it was secured in abundance six years ago. A large percentage of the sturgeon taken in Hudson river are small—under 20 pounds in weight—and are known locally as 'peelicans.' In 1892 the state interdicted the capture of these small fish, and this is expected to have a beneficial effect on the abundance of mature sturgeon.

The catch of sturgeon on the south side of Long island furnishes an instance of the development and decline of coastal fisheries. The fish are taken by means of floating gill nets with 12 or 14-inch mesh, operated during May and June, and also to a limited extent in September. The nets are set 1 or 2 miles from the shore from Blue Point to Montauk Point, and especially off Amagansett, Wainscott and Westhampton. This fishery began in 1892. In 1896 there were 103 men employed, using 37 boats and 223 gill nets, and the catch of sturgeon amounted to 314,430 pounds, gross weight, worth \$15,125. In 1898, when the fishery probably reached its greatest development, 187 men used 70 boats and 454 nets, and the gross weight of sturgeon secured was 509,365 pounds, worth \$43,864. Notwithstanding a large increase in the quantity of twine used by each boat, the average catch of fish in succeeding years showed a great decrease, and in 1901 the 57 men, using 25 boats and 257 nets, secured only 65,130 pounds, gross weight, of sturgeon, worth \$4,801. This fishery is so unprofitable at present that it promises to become extinct in a few years.

The department's report in 1892 gave a brief condensed account of the New Brunswick fishery, which sufficiently shows the rapidity of the decline, and the ineffectiveness of protective and recuperative measures to restore this important fishery when once the minimum stock of parent sturgeon has been reduced to practical extermination. The report says :

The history of the sturgeon fishing in the St. John river, N.B., can be summed up in a few words. Like the sea bass fishery, it was of short duration. Once found to be a remunerative business, improvident speculators rushed into it irrespective of protection, and although restrictions were legislated as early as 1881, they were of little avail to check the evil.

In 1881 a close season was established prohibiting the catch of sturgeon from August 31 to May 1. The mesh of nets was fixed at 13 inches extension measure, and a license fee of \$5 was imposed. In 1882 the license fee was raised to \$15. This failed to have the desired effect, as this industry seemed to have passed into the hands of a few foreigners who furnished the gear to resident fishermen.

In 1880, the catch of this fish reached 602,500 lbs.; in 1881 it fell to 453,450 lbs.; in 1882, only 284,350 were taken; in 1883, 125,280 lbs.; in 1884, 42,450 lbs.; while the catch of 1885 yielded only 26,240, and in 1886 it had dwindled down to 16,264 pounds, a decrease of 97 per cent in seven years.

This meant practical exhaustion of the supply if further fishing was allowed to continue; so, in 1886, the Inspector of Fisheries recommended a total prohibition of the fishing for a number of years. This suggestion was adopted, and the issue of licenses by the department ceased. Signs of improvement have been alleged since the closure was enforced; but those best able to judge assert that as compared with its former productiveness in sturgeon the St. John river has by no means been restored,

4-5 EDWARD VII., A. 1905

and before re-opening the fishery stringent measures will have to be enacted to regulate the operations, with a view to preserving a stock supply.

STURGEON IMPORTANT TO CANADIAN INDIANS.

In view of the large Indian population scattered over the vast western areas of Canada, it has again and again been urged that a fish so important to these native tribes for food was entitled to special protection, and with proper restrictive measures, a sturgeon industry and a lasting supply of food for the Indians could, it is claimed, be maintained for years to come. Some years ago an exceptionally able and well-informed Dominion officer reported on the sturgeon in western Canada in the following terms: 'I urge,' he said, 'the formation of reserves for fish on Lake Winnipeg and other waters of the west. I do so because of the sturgeon. There are no sturgeon in Lakes Manitoba and Winnipegosis, but the waters north and east of them teem with these fish, the value of which is only becoming known, and these waters have the last available supply in the known world untouched. In this one fish the Indian has an unfailing source of food and revenue for very many years to come, if it be properly conserved. The roe or caviare is in demand for export, the body of the fish and the sounds the Indian has for his family, the head and the oil—a better food than the head no man can get, and the oil, is the Indian's butter, and very good it is, too. Now, what is the value of these fish in the market? The flesh is worth more, or as much, as that of any other of our fishes, such as the lake whitefish, pickerel or doré, &c., and will never again be less. A female sturgeon with roe is worth more than a beaver, for the roe is worth over 50 cents per pound, and a ripe fish may yield 20 pounds. Such a fish is worth, say, \$12.60, viz.: the flesh, 50 pounds at 5 cents, is \$2.50; the roe, 20 pounds at 50 cents, is \$10, and the sounds are worth 10 cents. The saleable parts of one fish, leaving the oil and the head for the Indian fisherman, are thus of substantial value. If anyone thinks this statement incredible, let him ask any dealer in Selkirk, and he will gladly pay these prices for as many tons as can be brought. An American came to Manitoba a few years ago and bought sturgeon and other fish, buying chiefly from Indians. He strictly kept the law in all his dealings, but he was able to clear \$4,000 in a single year on sturgeon. No doubt this money is lost to Canada, and our Indians got no proper share of it, and if the system continues the country will have to feed the Indians and their families. Should not the extermination of the Lake of the Woods sturgeon have been prevented, as no white settlement existed in the vicinity of the fishery? It was purely an Indian population. It may be said that the Indian might farm, but on Lake Winnipeg, north of Dog Head, he has no land to farm on, and he must move south for that purpose. He must in the north hunt and fish, hence nets and boats are of more use than ploughs to him, and once his fishery is on a business basis he will not starve. The Berens river Indians have shown that the system is feasible. They take out licenses from the Dominion government and they sell their catches of fish, making several hundred dollars, often at a time of the year when as a rule they are nearly starving. The profit they made could easily be trebled by a little direction and by providing ice-houses for storage. It will be hard to keep outsiders from the sturgeon waters to the north. Commercially the sturgeon are in demand and will be sought after more and more every day. The Fisheries Department in Ottawa would be in a better position to resist the greed of outsiders, who wish to clean out the sturgeon and make money fast in these northern waters, by taking into account the just claims of the Indians, and their future, both as regards food and appropriate employment.' Of course there are difficulties in the matter, not the least being the innate indolence of the Indian and the irregularity of his methods and habits. It is difficult for him to realize that the markets require supplies of fish products even when he does not feel inclined to procure them; and the establishment of any commercial fishery on a business basis, where reliance is to be placed upon Indians, is a hazardous

SESSIONAL PAPER No. 22

project. But the extermination of the sturgeon by white fishing firms in our more remote waters, is a contingency that should be wisely guarded against.

USES OF CAVIARE.

As it is mainly for the ripe mature roe that sturgeon are everywhere eagerly sought in order to manufacture caviare therefrom, a few details respecting this product and its mode of preparation are desirable.

It is hardly necessary to say that caviare is used as a savoury, or as an '*appétisan*' preceding the first course at dinner. For this purpose it is not to be excelled, its intense rich, if somewhat fishy, flavour, being, in the opinion of epicures, much superior to anchovies or any other savoury. It may be served up on thin toast or brown bread buttered, without any cooking or preparation, pepper and lemon juice adding to its piquancy, or there are numerous ways of serving it in a variety of cooked forms, as *hors d'oeuvres*.. On account of its intensely strong or piquant flavour it is usual to spread it sparingly, much as thin jam is spread, although in Russia the freshly made 'zernistaïa ikra,' a light-coloured grain caviare, may be eaten in quantity as one eats rice or green corn. Many persons never acquire a taste for caviare, but to those fond of it there is no savoury edible more esteemed, and to stimulate an appetite before dinner it has no equal.

THE HARD STURGEON ROE IS BEST.

A sturgeon in the third or fourth year is said to produce the best caviare, and a roe nearly ripe, but not fully so is preferred. Just as in the roe-herring the nearly ripe fish contains the hard grained ovaries which the *connoisseur* approves, whereas the ripe ovaries are soft and have a slightly changed flavour, so the hard roe of the sturgeon, rather than those very soft and ripe are most valued. It is sometimes asserted that Russian caviare is superior because of the larger size of the individual eggs composing the roe; but the Fraser river sturgeon and those in Lake of the Woods and Lake Winnipeg are quite large, whereas the roe of the Russian sterlet, which are most valued, are smaller than those of the common species—the eggs of the sterlet being 2 mm. in diameter while those of the sturgeon are 2.6 mm. in diameter. One authority tells us that although the preparation of caviare in Russia does not differ from that adopted in other countries, its superiority is due to the fine quality of the roe. It would be more true to say that the freshness of the roes and the promptness exercised in at once handling and carefully preparing it, are the secret of its excellence. All fish products, as a rule, demand immediate preparation.

VARIATIONS IN CAVIARE.

Caviare shows much variation in colour, all gradations from light brown or even yellowish white to deep brownish or bluish-black being seen in the markets. For immediate use the lighter colours are preferred, but the preserved caviare is usually made of the deep coloured, almost black roes.

It is interesting to note that lake sturgeon produce larger eggs than species which ascend from the sea to spawn. The paddle-nose sturgeon of the Mississippi yields an inferior quality of caviare, but many other fishes have been utilized and their eggs converted into various kinds of caviare.

For example, the eggs of the bream (*Abramis brama*), of the perch (*Lucioperca sandra*), and of the 'vobla' or chub (*Leuciscus rutulus*) are also used for making a form of caviare which finds a market principally in Constantinople and Greece. Merchants from Greece visit the fishing establishments near As-

trakhan, purchase the fresh eggs, and have the caviare prepared under their own supervision in a manner quite similar to the salting of mullet roes in the United States. The roe bags with the eggs therein are carefully removed and mixed with dry salt in bulk. After sufficient salting the mass is placed between boards weighted down by heavy stones, and after remaining thus for a month is shipped in casks. In the retail trade it is usually cut into disk-like slices and is much sought after in Greece. From 500,000 to 700,000 pounds of the caviare from perch eggs are prepared every year in Kuban. During recent years the Greek islanders have prepared large quantities of roes from the above named species of fish.

Day states that the roe of carp (*Cyprinus carpio*) is made into caviare by Jews in Italy and Eastern Europe, as by their regulations they may not eat caviare made of sturgeon, that fish being destitute of scales.

The fishermen of the Dardanelles prepare a kind of cheese from the roe of several species of fish by drying it in the air and then pressing it. By dipping it in melted wax, a crust is formed over it which prevents its being affected by the air. Inside this crust the roe undergoes a sort of fermentation, giving it so piquant a flavour that one can eat but little of it at a time. It is said to taste like a mixture of fine sardines, caviare and old cheese. Before it is eaten, the crust of wax is taken off, and if it has become mouldy, which frequently happens, it is soaked in strong vinegar.

In Germany a form of caviare is made from the eggs of the pike, in the following manner. The fresh eggs on removal from the fish are rinsed in cold water and rubbed through a coarse sieve to separate them from the membranous tissues enveloping them. On completion of this, they are rinsed two or three times and are placed in a finer-meshed sieve to drain. Next, they are well mixed with fine salt and flavouring ingredients, there being added to each 100 pounds of eggs about $3\frac{1}{2}$ pounds of fine salt, $2\frac{1}{2}$ ounces of citric acid, and a small quantity of lemon oil. After being thoroughly mixed with these ingredients the eggs are put in a cool place, and after remaining undisturbed for eight days the jars or tubs containing them are tightly sealed.

Shad eggs have also been used, being mixed with the roe of the sturgeon, but the resulting product decreased its value and quality.

METHOD OF CAVIARE PREPARATION.

There are certain precautions which must be observed in making caviare, apart from the actual process itself, if the resulting product is to possess the features most desired.

(1.) Various colours of eggs must not be mixed. If the roes are pale or dark these must be kept separate or a piebald particoloured caviare of undesirable appearance will result.

(2.) No water must be brought near the eggs, as it has a tendency to soften and break the eggs.

(3.) The ovaries must be kept clean, carefully separated from other parts of the fish, and scrupulously handled so that the eggs may not be crushed or broken.

(4.) The egg must be taken from the fish as soon as possible after it is killed by cutting it across the region of the neck. Eggs not perfectly fresh yield only low grades of caviare.

It is not really difficult to manufacture good caviare as the process consists essentially in merely cleaning the eggs from the enclosing bag or membranes, fat, &c., and properly salting the cleaned eggs, yet much bad, almost worthless caviare has been produced in Canada and the United States owing to careless cleaning or inferior salting. Sturgeon oil is often used to soften the caviare if it appears too dry in its final condition.

Dr. Nikolas Borodine, of St. Petersburg,* states that there are two kinds of caviare, the fresh or grain caviare (*zernistaia ikra*), and hard or pressed caviare (*paiousnaia*

* Revue Internationale de Pêche, Dec. 1899.

SESSIONAL PAPER No. 22

ikra). He says that *caviar à grains* is prepared by clearing away the skin, ovarian membranes and tissues of the stroma from the eggs while in a fresh unsalted condition. A stand or table with a top of meshed material, like a sieve, 39 in. long by 18 in. wide is used for cleaning the eggs. The sieve material which is destitute of knots or inequalities has meshes $\frac{2}{3}$ to $\frac{3}{4}$ of an inch across, large enough to allow the spherical eggs to drop through unbroken, when gently rubbed by the hands. As the hands gently press backwards and forwards over the egg-masses they are forced through the meshes; but the skin and fatty flakes remain on the surface of the sieve. Ovaries not perfectly fresh are more difficult to handle as the eggs do not separate from the enclosing bag, or ovarian membrane readily, and some of this substance goes through with the eggs. From this impure egg-material lower grades of caviare are made. On dropping through the sieve, they collect in a trough below, and pass off into tubs. Salt of the best quality is then mixed with the eggs by means of a wooden paddle or fork or by hand, and in 10 or 15 minutes the salt draws out some of the watery contents of the eggs so that they become resistant and dry and the brine which sinks to the bottom is poured off. Dr. Borodine says that 10 lbs. of fine Lüneburg salt or salt from the lakes of Indere, Baskountchac is used. More salt is used in summer, less in winter. It is put up in round tin boxes ready for sale as fresh caviare and it brings a high price.

The pressed caviare is made by soaking the cleaned eggs in a brine solution, more or less salty, according to the length of time the product is intended to be kept. They become hard, but must not be kept too long in the brine or the caviare is over-salted, and the process requires great skill and judgment on the part of the workmen. When sufficiently pickled in the brine the eggs are placed in coarse, thin bags under a press, and squeezed until 'le lait' or the milky albumen of the egg oozes through. The surplus fluid is allowed to run off, and the pressed, salted eggs are placed in wooden barrels holding 1,000 lbs. (480 kg.) or in sacks or thin linen bags about 20 in. by 8 inches, or varied in size according to the customer's wishes.

SUMMARY OF PROCESS.

To summarize the process in preparing the two kinds of caviare, it may be said that there are four stages in producing fresh or grain caviare.

GRAIN CAVIARE.

(1.) Careful removal of the ovaries or egg-sacs from the fish, without breaking them, crushing the eggs, or permitting water to touch them.

(2.) Rubbing the egg-masses by hand upon a table with meshed or sieve top through which the egg falls intact, the skin, membranes, &c., remaining on the sieve.

(3.) Mingling the eggs with varying proportions of salt according to the season, and stirring with a wooden spade. (The best German or Lüneburg salt is preferred).

(4.) After standing 10 or 20 minutes, the brine formed is poured out and the salted eggs are packed in 1-lb., 3-lbs., or 5-lbs. tins, often lined with parchment paper, or into wooden kegs for wholesale trade. Small packages in tin-foil or silvered paper are made up for the retail trade.

For pressed caviare the treatment, as already seen, is different after the second stage and may be summarized as follows:—

(3.) The cleaned eggs drop into a tank of brine where they lie until hardened, a delicate operation, requiring experience. If soaked too long the caviare is over-salted, if too short the caviare will not press properly.

(4.) Pressed in a coarse, thin linen bag until the milk or frothy albuminous moisture exudes.

4-5 EDWARD VII., A. 1905

(5.) The pickled caviare is packed in casks of 1,083 lbs. Av., or in sacks 20 inches long by 8 inches wide.

Properly made caviare exhibits the rounded granular appearance due to the entire and unbroken character of the eggs. In the final small retail packages this is largely lost, and the caviare has the consistency of a dense black paste.

CANADIAN CAVIARE, WHERE SOLD.

Very little Canadian caviare is sold in the Dominion. At some of the best hotels, notably at the Canadian Pacific Railway hotels on the Transcontinental route, it usually appears on the daily *menu*; but the bulk of it is shipped in kegs to United States dealers, who send it *via* New York to the Hamburg caviare merchants. These Hamburg dealers monopolize the business, and no doubt make handsome profits out of the Canadian product, though it is well known that the United States fish merchants from Duluth, or rather St. Paul and Minneapolis, as well as Chicago, Detroit and Buffalo in the west to New York and Boston in the east, did for many years reap a golden harvest from this valuable Canadian product for which our fishermen either received no recompense at all, or a very low rate of payment. The final destination of much sturgeon roe secured in Canada was either Germany, Russia or London, and much of it no doubt returned to this side of the Atlantic put up in characteristic European packages and marketed at exorbitant European market prices. Some small shipments of Canadian caviare were shipped direct to London from Rat Portage, Lake of the Woods six or seven years ago, the English buyer, whose annual sale was from 8,000 to 10,000 lbs. paid 75 cents per lb. wholesale. This caviare at once established itself in the market, but doubtless owing to the fact that the handling of the product on this side of the Atlantic has been, all along, in the hands so largely of the United States firms, the direct business did not develop as was expected. The following interesting press notice refers to the experimental shipment: '*Canadian caviare*, a new Canadian product of an unusual sort has been placed on the market in London, England, through the efforts of the Canadian Department of the Imperial Institute, 1,500 lbs. of caviare having arrived there from a Rat Portage house as a trial shipment. It came in cold storage, and the London consignee was well satisfied both with the quality and the condition in which it reached him. It is said that the appearance the Canadian product closely resembles the best Russian, and is greatly superior to much that reaches the United Kingdom.' The demand for caviare in this country is rapidly increasing, and the article brings high prices, so that the trade is doubtless worth cultivating. The high prices referred to have been maintained, and I have seen reliable statements recently that caviare has risen to \$1 per pound at the fishing wharfs, and no doubt the price will ere long advance even much beyond that high figure. An American journal points out that the inferior caviare of the sea-run fish has risen to 95 cents per pound within the last few months. The statement referred to is as follows:—

There have been seasons when the shipment of caviare from Bayside, N.J., to the European markets has amounted to more than 500 kegs, says an exchange, but unless there is a big run of fish shortly less than one-third of that amount will be produced this year. At the rate at which caviare is now advancing in price all previous records promise to be broken. The present price is 95 cents a pound on the wharf, which is equal to \$120 a keg.

STURGEON FLESH, ETC.

For the flesh of the sturgeon there is no great demand in Canada, though Indians and western travellers esteem it highly. Its appearance to most people is not appetising on account, partly, of the variety of colours seen in its meat. 'It is said,' the late Frank Buckland stated 'that a good cook can obtain beef or mutton, pork or poultry out of one sturgeon, in other words, fish, flesh and fowl,' and the peculiarly streaked colours

SESSIONAL PAPER No. 22

in a sturgeon steak bear out this statement. In Paris, sturgeon flesh is classed amongst the highest grades. Sturgeon, salmon, trout, soles, lobsters, oysters, &c., are indeed classed as 'fine fish' and pay the highest duty when imported, viz.: 10 per cent, whereas the lower grades, *i.e.*, ordinary fresh fish, pay only 5 per cent duty. The large sturgeon of the west, specially the monstrous specimens captured in the Fraser river after being cleaned, and placed on the shelves of the fish-refrigerating houses looked like gigantic sides of bacon. They are shipped in that frozen or chilled condition to dealers in New York and other cities, where they are cured and smoked, and sold to the Russian, German and other foreign residents, amongst whom there is great demand for sturgeon, smoked or otherwise prepared.

ISINGLASS PREPARATION.

A very valuable product of the sturgeon is that finest quality of glue called isinglass. The large vesicle or membranous swim-bladder of the sturgeon provides this material. After removal from the fish it is cleaned, all fatty matter, blood, &c., being carefully washed and scraped away. It is cut into strips and exposed to the sun and air to dry, being often nailed to boards to facilitate this.

The inside layer of the bladder is carefully detached and pressed to prevent its contraction and ten or fifteen sheets of these pieces weighing 18 or 20 oz. are packed in linen and often sealed in metal boxes. The clear lining membrane of the swim bladder is nearly pure gelatine; not much gelatine or isinglass occurs in the whole organ, and in the lower parts of the Volga in Russia, the gelatine is boiled out as a fine quality of glue, and poured into moulds of various forms. Mr. P. L. Simmonds in his account of isinglass manufactured in India says:—

'The lining membrane of the air-vessel of the sturgeon, as already noticed, yields the best isinglass, but it has been rejected in the Indian forms, which accounts for its more fibrous nature, although not proving that this lining portion in India is of the best. East Indian isinglass has some positive defects, such as retaining a fishy smell, besides being partially insoluble, perhaps due to some portion of the albuminous membranes remaining. In fact, it requires more care in its preparation, which should be undertaken whilst it is quite fresh; and greater caution is necessary in the drying process. If it be not properly dried, it might possibly undergo a slight change or decomposition, and become partially converted into a more insoluble form of gelatine. A more important objection is the smell, which, however, may likewise, to some extent, be traced to the preparation. Care should be taken that it is not contaminated by the animal fluid of the fish, for then it becomes very difficult to purify. Likewise, it is too thick, which may be obviated by beating or pressure, as is now done with some American and Brazilian kinds. "The extra labour that this would require," observes Royle, could be profitably saved by not tearing it into fibres, in which form it is disapproved of in the market; it might still be cut or rasped into a state fit for domestic use." The same authority likewise states that—"It is preferable, and will be cheaper, to prepare the article and send it as sheet isinglass, that is, in the form of the slit sounds themselves, or their purest membrane, washed, cleaned, and dried in the best manner. . . . Isinglass cut into threads is unsuitable for the English market, because there is a great prejudice against purchasing wholesale, things in a cut and powdered state, in consequence of the innumerable methods adopted for adulterating marketable products.'

USES OF ISINGLASS.

Isinglass was a valued substance amongst the ancient Romans, and its uses are numerous in modern times. Its high price (nearly \$3 per pound retail) has caused many substitutes to be produced: but as a food in the sick room, nutritious, pure and unirritating, as well as its uses in cooking and confectionary, it has features not to

be perfectly imitated. Internally and externally it is employed in medicine, and is largely used in the better qualities of court-plaster, while for clarifying or 'fining' wines and beer it is invaluable. For the last named purpose its peculiar organic properties renders it superior to any artificial substitute.

The best isinglass is a flexible white semi-transparent substance usually in thin flakes, destitute of taste and smell. It readily dissolves entirely in water, and gelatinizes as a soft tremulous solid on cooling. Inferior kinds are thicker, more opaque and yellowish or brownish in colour with a fishy smell or taste. The commonest grade called cake isinglass is used only for inferior purposes, chiefly in making solutions of glue. It is marketed in sheets or flakes in lumps, long and short tongues or pipes, purse-shaped lumps, blocks, honeycombs and fine threads.

Russia for long supplied isinglass to the world, but in 1851, the famous British anatomist, Professor Richard Owen, noticing that Canada sent no specimens of isinglass to the great exhibition of 1851, drew the Canadian Commissioner's attention to the fact, especially as the North American rivers abounded with sturgeon. Since that time more attention has been given to the preservation of the air-bladder or swim bladder of the sturgeon, and it is not now thrown away amongst the entrails and garbage as it was formerly. It is nearly 25 years ago since a firm of foreigners demonstrated to Canadians the value of the main products, as well as the waste, or by-products of the sturgeon. As the Dominion inspector at the time (1881) said of the industry on the St. John river, N.B., to which reference has already been made on a previous page:—

'In the morning, the fish are taken to a floating platform attached to the shore. The heads and tails are cut off; the entrails removed; the skin taken off; the backbone cut out, and the two sides of the fish are packed in ice in large boxes, and exported to New York, where the flesh is smoked by small dealers for immediate consumption. Every portion of the sturgeon, as handled by these foreigners, is turned to profitable account. The roe, which is developed in astonishing quantity, closely resembles turnip seed in size and colour. This is manufactured into caviare so highly relished by European gourmets. The 'sound,' or air-bladder, which is very large, is carefully dried for export, being used in the manufacture of gelatine and the finer qualities of glue. The head, tail, skin, entrails and backbone are dried over a slow fire, and yield a considerable quantity of valuable oil, which is in great demand by leather dressers. The refuse, after the oil has been extracted, makes a good fertilizer and is composted by farmers in the neighbourhood of the fishery. Thus, every part of a fish hitherto considered valueless by our people, was turned into profitable account when properly handled, and became a source of remunerative employment to the fishermen of the vicinity while it lasted.'

The oil is extracted from various parts of the viscera and the body, and quite a proportion is obtained in the skin under the bony plates of the back. It is a clear oil of agreeable smell and flavour, and valuable in cooking operations, though for long used in Europe by saddlers and leather dressers for preparing certain kinds of leather.

FOOD OF STURGEON.

If the quality of a fish for the table has any relation to its food, the sturgeon should possess the most esteemed comestible excellencies. It feeds largely on very select food, indeed, and does not appear to be the scavenger that most people declare it to be. In 1893, I studied very carefully the food of the sturgeon in the St. John river, N.B., and published a report upon the subject five years later. (See 29th Annual Report of Marine and Fisheries Department, 1898.) My results showed:—

- (1.) The sturgeon was not predaceous and did not as a rule devour other fishes.
- (2.) Its food did not consist of fish spawn to any appreciable extent.
- (3.) Mollusks or shell fish of various small species, and crustacea of the shrimp and crayfish type, form its staple food.

SESSIONAL PAPER No. 22

I find that in the year following my investigation on the St. John river, Professor A. J. Woolman studied the food of Lake of the Woods sturgeon, and the conclusion he reached after examining the stomachs of 55 sturgeon, was very much the same as my own. He found in 28, digested crustacea, chiefly crayfish, in 6 there were mollusks, or water snails and clams; in 6 there were insect larvæ or grubs; 8 contained gravel, and 22 were empty. The remains of a fish egg is said to have been found in one sturgeon, but probably the determination was uncertain. Many objects resemble fish eggs, especially after being in a fish's stomach for a short time. As I pointed out in the case of the St. John river, notwithstanding that the sturgeon I examined were near the famous spawning grounds of shad, gaspereaux and other spring spawners, no trace of eggs or of newly-hatched fry was perceptible under the most minute and patient examination. It is true that some British Columbia sturgeon which I examined nearly ten years ago were crammed with the smelt-like oolachan or candlefish, one specimen two yards long containing thirty of these small fish, but I attributed their presence to the fact that the fish had probably been thrown into the water dead by some fisherman, and thus fell an easy prey to the sturgeon. The fact has been frequently emphasized that the schools of sturgeon appear simultaneously with the appearance of vast quantities of small fishes upon which, it is surmised, that they feed. Thus, in the rivers of California it was long ago pointed out that sturgeon became most plentiful in July and August, when the great runs of sardines and small herrings are noticed. This applies to the Pacific rivers of this northern continent generally. Also when the smelts come in January and February, the sturgeon are most numerous. From these facts it was surmised that the large Pacific sturgeon habitually feed on these small fish. It has even been alleged that the sturgeon feed on salmon. The *Daily World* (Vancouver) a few years ago, published a paragraph emanating from New Westminster, as follows: 'It is reported here upon good authority that a big sturgeon opened for the local market was found to contain two large-sized sockeye salmon. Professor Prince might make a note of the fact, as it is generally supposed that the sturgeon subsists on salmon spawn, but not on the full-grown fish of the salmon species.' That sturgeon ever capture salmon when swimming up the rivers is most improbable. A pair of large gum-boots have been found in the maw of a huge Labrador cod; but the normal food of the cod could not be deduced from that fact. As I have dealt fully elsewhere with the subject of the usual food of the sturgeon, I need not say more in this place.

SPAWNING HABITS.

There is a good deal of obscurity on the subject of the spawning habits of the sturgeon. The time and place are alike uncertain, and most sturgeon fishermen claim that ripe fish are to be found at all seasons of the year. It would appear as though June, July and August covered the main period, and it is probable that the spawning operation is a slow one and occupies a prolonged space of time. It is certainly most difficult as a rule to carry out the artificial spawning process, which is so easy in the case of most market fishes. The ripe spawn issues readily and streams from the fish when slight pressure is applied, but as Prof. J. A. Ryder long ago pointed out, this 'is not feasible in the case of the sturgeon, and the removal of the ripe ova must be accomplished by slitting the abdomen.' A similar operation is, as a rule, necessary with the male when it is desired to fertilize the eggs. The eggs when ripe are usually very dark, a deep olive green, or brownish black with a tinge of purple, and measure about 1-12 of an inch in diameter. They are very glutinous and have a soft stringy appearance when handled in a fresh condition, the round seed-like eggs adhering in ropy masses, but on being placed in water the gummy covering hardens and the eggs are at once cemented to any adjacent object. Sturgeon ascend from the sea to shallows in fresh water lakes or streams, or in the land-locked species, they migrate from deep water to inshore areas 1 to 5 fathoms depth, where the bottom is hard. There, it is

4-5 EDWARD VII., A. 1905

usually stated, they spawn by pressing the abdomen upon the rough ridges, and forcing out the glutinous masses of eggs. A Pacific sturgeon weighing 243 pounds was found to yield 51 pounds weight of spawn, the flesh or dressed meat weighed 130 pounds, and the head and offal weighed 62 pounds, and the quantity of ova thus obtainable from a few large ripe females is very large indeed. Various methods of artificial incubation have been suggested, the most feasible apparently being the attachment of the glutinous ropes of eggs to cords suspended in the water where a current flows.

It would appear, however, that the propagation of sturgeon by protecting the parent fish in their natural habitat is the only really trustworthy method at present, and if the spawning grounds can be ascertained and defined with some certainty, and a certain number of parent fish permitted to reach those grounds, there need be no fear of the extermination of the sturgeon, so great is their capacity for multiplication.

II.

METHODS OF COARSE FISH EXTERMINATION.

BY PROFESSOR EDWARD E. PRINCE, COMMISSIONER AND GENERAL INSPECTOR OF FISHERIES FOR CANADA.

One of the difficulties encountered in the efforts of the Department of Marine and Fisheries to stock, in some cases, or restore, in other cases, valuable kinds of fish in Canadian waters, is the presence of other species of less valuable kinds. These coarse species, often regarded as valueless both for market and for sport, are in various ways directly detrimental to better class fish.

Inferior species of fish may actually devour and live upon the superior kinds (either the eggs or the fry, or the mature fish), or they may devour the food upon which the superior kinds subsist, resulting in the depletion or at any rate the starvation of the more esteemed varieties, and their serious decrease in condition and in numbers.

COARSE FISH USUALLY VERY PROLIFIC.

There can be no doubt of the correctness of the opinion expressed by Mr. Willis Bund*, that the cause of the rapid increase in the numbers of inferior fish is due to their more prolific character, as well as to the nature of the ova which effectively protects them from many enemies to which the eggs of salmon, trout, lake whitefish, &c., fall a prey. 'No one' says Mr. Bund, 'who has paid any attention to the matter but is aware that, fish for fish, the number of eggs produced by a Salmonoid fish is far less than that produced by a coarse fish. It is not necessary here to give details; but let any one who doubts this statement take the spawn from a 4-oz. trout and a 4-oz. dace and count it. He will find the balance in favour of the dace most startling. Even allowing that a greater proportion of the eggs of Salmonidæ hatch out than the eggs of the coarse fish, although there is no really satisfactory evidence that this is the case—even allowing this, the balance in favour of the coarse fish is enormous. . . . We have not reached yet on land the Hebrew prophet's ideal of the wolf lying down with the lamb; but when we do, perhaps in our rivers the salmonidæ and coarse fish will thrive together; but it will not be until then.'

GAME FISH OVER-FED ON COARSE FISH MINNOWS.

From the angler's point of view, the increase in coarse fish presents another serious objection. The schools of fry of the inferior species when immature or even when mature, may provide such a superabundance of food that the game fish lose their customary sporting qualities and 'won't bite.' I know of many instances of this state of things. The fish will not take the fly because they are so gorged with food of a more substantial nature. In some of the southern lakes of the maritime provinces the land-locked salmon found in them are universally reported to be lacking in game qualities, and won't take either fly or bait owing to the plentitude of food in the shape of the delicate smelts which abound in the lakes in question. In the spring (in May and June) after the ice breaks up and melts away, these fish will then take the hook voraciously, as they have not begun to feed upon the smelts (which appear to have

* A Handy Book of Fishery Management, London, 1899.

4-5 EDWARD VII., A. 1905

moved for spawning purposes into the shallows), and the salmon are thus hungry after their winter fast. In many black bass lakes, as in the Gatineau region, near Ottawa, the anglers generally attribute the poorer fishing, which they have, to the increase in the abundance of small carpoids called 'chub,' 'shiners,' 'minnows,' &c.

COARSE FISH DRIVE AWAY BETTER SPECIES.

The presence of these inferior fish in increasing numbers, has the effect of driving the better fish from their accustomed haunts, as for instance the intrusion of German carp on many fine black bass grounds has caused the latter fish to wholly forsake the localities where they formerly abounded, or in the case of the incursions of more predaceous fish, the superior varieties are devoured and depleted. Of this latter destruction I have in a previous report given examples (special report, 1901, the Propagation and Planting of Predaceous Fish), and the views of Mr. Willis Bund, upon this point, are again most apt and instructive: 'If you settle that you are going to preserve trout' he says, 'and the trout do not considerably outnumber the coarse fish your next step is to get out some of the coarse fish, and you have to decide which. *Prima facie* I should take out chub, pike and ruff (a kind of perch). The number to be taken out depends upon two things, the number of your trout, and the number you can catch. It is all very well to say take out the pike, but it is not easy to catch them. However, it is to be done; and no means, net, trimmer, shooting, spearing, or snaring, should be spared. Get them out with rod and line, if you can, but get them out.' There are two points, however, in Mr. Bund's advice, which require modification in our Canadian waters. In the first place the law prohibits the shooting of fish of any kind, and on account of the vast size of most Canadian rivers and lakes some more effective, wholesale method of extermination is necessary than any which he suggests.

INFERIOR FISH GENERALLY SPRING SPAWNERS.

Now it is a remarkable fact that, with the exception of the pickerel, doré or pike-perch, the species of fish which are spring spawners, are chiefly objectionable. This fact is of the highest importance as it at once suggests the readiest means to be adopted for effectually reducing, and indeed, exterminating the undesirable kinds. By appropriate methods it is a matter of no extreme difficulty to secure the spawn or eggs, and in this way ensure the destruction of incalculable quantities of the fry or young brood before hatching. Very little experience will enable this to be done if once the mode of procedure is made plain. I propose, therefore, to make such practical suggestions, as a fishery expert, in the following pages, that any parties determined to take effective steps can do so. My suggestions are based upon my knowledge of the breeding habits, nature of the eggs, and character of the young or fry of the fishes referred to.

EGGS OR SPAWN MUST BE DESTROYED.

If the eggs can be destroyed on an extensive scale, the extermination begins at the fountain head. Kill off the parents as far as possible; but spare no effort to take the spawn and ensure its destruction. All authorities are agreed that if the breeding adults and the young brood of any animal, bird or fish, can be protected, there need be no fear for the abundance of them in the future. Conversely, destroy these, and you cut off all hope of future plentitude. I remember well in his Lent Term lectures at Cambridge, England, exactly twenty years ago, the venerable and distinguished Professor Alfred Newton declaring that 'There is one cardinal rule for the preservation of any species. Whatever species we would protect we must protect the parents before and during the breeding season. We do this in case of our domestic animals, and we can safely thin them out at any other time. The partridge in England, notwithstanding its persecution for five months every year, survives in plenty by being rigidly protected

SESSIONAL PAPER No. 22

for seven months. I once knew a mole-catcher,' (added the Professor) 'who was paid for the number of moles he caught. He said that he always gave them a close time when breeding so that he could be sure of keeping up the number and thus continue to kill as many as possible.' The same principle applies to fish, and it is worthy of remark that the spring-spawning habit of the less-valued species involves some advantages to which Mr. Willis Bund, I believe, first called attention. Not only is it true that of the ova deposited the percentage hatched out in spring-spawning fish is considerably greater than in autumn-spawning fish; and also that the quantity of ova produced by the former exceeds that produced by those spawning in the fall, but 'in autumn there is little food for fish, and that little is entirely under-water food; in spring there is a good deal of surface food. The fish in the autumn are feeding on the bottom, and so take a far larger proportion of the ova for food than they do in the spring; for this reason, that in the autumn this is the only source of food, in spring it is one of many sources.'

As I pointed out in my report last year upon the marine dogfish pest (Rep. of Marine and Fisheries, Fisheries, pp. xlv-lxi):—

'Fishermen and others should be discouraged in the common practice of liberating young dogfish in the ocean, and the destruction of the parent fish with their broods of contained young should be enjoined. If, as is stated, the dogfish taken in December are for the most part females, their capture at that time is of immense importance. The destruction of breeding female fish has been abundantly shown to be a direct means of reducing the supply of fish in the future. The fishermen, especially fisher boys, almost daily capture a number of dogfish, rip them open, and drop the living brood of young into the sea. It is a common amusement to do this, and to watch the active and well armed young, 5 or 6 inches in length, swim vigorously away. Each has a bag of yolk hanging like a sac under the body, and this supply of food gives them additional security; but though thus provided they have the predaceous instinct very strong, and pursue living fish quite readily. Dogfish, like all the shark tribe, produce each season very few eggs; but nature has defended the young in the most effective manner. The viviparous species extrude their young in a condition well fitted to secure them from harm. They are of large size as compared with newly hatched fish like cod, salmon, &c., and with their hard rough skin, spiny back, powerful tail, and precocious nature they are well able to look after themselves. No greater folly is possible than to assist these vermin into the world, and scatter them in the very areas, where the more valuable food fish occur. It is artificial fish-breeding of a most successful kind; but it is a most pernicious course for a fisherman to adopt.'

The importance of destroying the eggs and young of valueless fishes cannot be too greatly emphasized. Its effect in reducing their numbers, in the seasons following, is direct and immediate. The clearing out of adult fish does not necessarily mean so large a destruction as may at first sight appear, for the eggs they have deposited, or the minute fry, in countless numbers remain, and the pest continues little abated.

DANGER IN NETTING OUT MINNOWS.

The destruction of the eggs is preferable to the extermination of the young for this reason, that unless a specially trained expert is present, vast numbers of valuable fry may be destroyed along with the useless kinds. From my own almost unequalled experience in handling the newly-hatched young, or the later larval young, of several hundreds of species of the most important fishes, I can in many cases at a glance determine the kind of fish, whether it is a valuable or a useless variety. Very few living experts can do that, excepting to a limited extent, on account of the close resemblance between very different species in an early stage of their existence. It is, for instance, difficult, unless one has some experience, to always determine amongst a series of puppies (dogs) the exact variety to which any one may belong. It is still more difficult to distinguish between the young chicks newly-hatched of different varieties of domestic

fowls, and hardly possible for an ordinary observer to say which is a young partridge and which is a young domestic fowl, if both kinds are placed before him. Even experienced fishermen are as a rule wholly astray when asked to decide the species of any young minnows placed in their hands. Some years ago, I showed some young specimens of the doré or pike-perch (*Stizostedion*), 2 inches long, to a crowd of Lake Ontario fishermen, and they all agreed that they were dogfish fry, that is the young of the bowfin, or lake dogfish. These men were unable to determine which was the young of one of the most valuable of market fishes and confused it with the most detested and worthless of all. Drs. Jordan and Evermann refer to the same inability when speaking of the various small fishes, called 'minnows' by the live-bait dealers. These so-called minnows include, they say, darters, killifish, and various kinds of suckers; the mud-minnow (*Umbra limi*), which, of course, is no minnow at all, any more than it is a young dogfish (*Amia calva*), as many fishermen will assure you, may be found amongst the species offered for sale.' I have frequently found that young whitefish are called chub, and even spoken of as shad, and as menominee, when slightly larger, 4 or 5 inches long; and respecting the latter fish, which is a veritable recognized species inhabiting certain waters of Canada, it is called shadwaiter, or in some places frost-fish, pilot-fish, or blackback. It is sufficiently clear that in any attempt to net out schools of young fish there is great risk, and vast quantities of important fishes may be ignorantly destroyed.

SPAWNERS AND EGGS DESTROYED WITHOUT RISK.

There is no such danger involved in destroying eggs, or the full-grown parent fish when about to spawn. Such egg-bearing female fish contain quantities of eggs varying from 200 to 200,000, or even up to many millions. Most of the suckers, perch, pike, &c., found in our interior waters, if of average size, contain from 50,000 to 500,000 eggs; but fish like the trout, salmon, grayling, ouananiche, &c., rarely produce more than 1,000 to 7,000 or 8,000 eggs, as a rule, indeed, about 900 to 1 pound weight of fish. The late Frank Buckland's well-known table is given below for comparison's sake :—

Carp of 14½ lbs.	633,350
Cod of 20 lbs.	4,872,000
Cod, roe 7¾ lbs.	6,867,840
Conger Eel, 28 lbs., roe 23 oz.	15,191,040
Herring of ½ lb.	From 20,000 to 50,000
Jack or Pike, 32 lbs., roe 5 lbs.	595,200
Jack or Pike, 28 lbs., roe 21 oz.	292,320
Lamprey of 2¼ lbs.	136,800
Lump Fish of 2 lbs.	116,640
Mackerel of 1 lb.	86,120
Perch of 3 lbs. 2 oz.	155,620
Plaice, 4 lbs. 15 oz.	144,600
Roach, 28 lbs.	480,480
Salmon contains on an average 800 to 900 eggs to the pound of the fish's weight.—A Salmon of 12 lbs. about	10,000
Smelt of 2 oz.	36,652
Sole of 1 lb.	134,466
Trout of 1 lb.	1,000

BREEDING FISH MUST BE DESTROYED.

The capture of parent fish, when crowding the breeding areas, effects the destruction of such vast quantities of eggs, each of which eggs would in a short time be deposited in the water, and in due course give birth to an active young fish, that it should

SESSIONAL PAPER No. 22

be carried out in every possible instance. For the purpose of diminishing the numbers of less-valued or wholly worthless kinds of fish, their destruction in spring is by far the most effective. Why is this? It is because at any other time of the year the killing of a mature fish implies no more than the destruction of one fish which, if it survived the constant perils and dangers besetting all fishes in their native element, might become the parent of a numerous progeny. Experts have found that very few parent fish will suffice to keep up the minimum supply of any species and save them from too serious a diminution. This applies to valued and worthless kinds alike.

The conclusion was reached by the Tweed Salmon Commission in 1896 that the supply of salmon can be kept up, if a sufficient proportion of each run of fish is enabled to reach the rivers and ascend to the spawning grounds.

Hence, if a useless or detrimental species is allowed to propagate freely and without disturbance, and the eggs and newly-hatched fry are left unmolested, the surplus fish produced, in excess of the normal quantity necessary to maintain the species in existence, is so great that they over-run the waters frequented by the better-class fish and become a serious menace to them.

COARSE FISH VALUED IN SOME WATERS.

Of course, a species which may be undesirable in some localities is regarded and valued in others. Yellow perch, and doré or pike perch are esteemed in some districts, and well-known anglers in New York State have assured me that they regarded the yellow perch as a sporting fish by no means unimportant and worthy, therefore, of protection and artificial propagation. In Canada, it is viewed by the angler with contempt, and in most localities voted a nuisance, yet Drs. Jordan and Evermann (*American Food and Game Fishes*, p. 366) say that 'as a game fish the yellow perch can be commended chiefly on account of the fact that anybody can catch it. It can be taken with hook and line any month of the year, and with any sort of baits. . . . Many an inland summer resort is made vastly more attractive because our wives and children, who are spending the summer at an inland lake, are always able to bring in good strings of delicious yellow perch.' Similarly, many species of fish are protected and valued in Europe which are viewed with no favour in the choice waters of Canada.

I make reference on a subsequent page to the table qualities of one species of chub, which indeed has been passed off or mistaken for that excellent lake Salmonoid, the whitefish (*Coregonus*); but in considering the claims of inferior species to be ranked as sporting fish, and valued as such, this species (the fall chub) cannot certainly be viewed with contempt. As a well-known authority recently said:

'I suppose that it does not matter very much to many anglers whether chub are plentiful in Canada or whether they are not, for if anglers come so far north at all, they may just as well have trout fishing as fishing for chub. But I am lead to refer to the abundance of chub in Canadian waters because of the enthusiasm which I saw displayed the other day by an angler who was enjoying what he considered magnificent sport with these despised Canadian fish. They were rising to his flies with an avidity worthy of a better fish, and though they gave rise to no very protracted battle, yet their first rush after feeling the hook was not unlike that of a trout. With this first show of resistance, however, their struggles ceased, and they came quickly to the net. The best of this sport is the rapidity with which the fish rise to surface lures. Wherever they are found they are usually plentiful, and it is by no means uncommon to find them from a pound to two pounds in weight. If the sport were more cultivated, specimens could undoubtedly be found of from two to four pounds each, but because trout are also usually found where chub abound, the rising of the latter to the angler's flies is considered to be more or less of a nuisance, and when it can be seen that one of them is rising, an effort is usually made to snatch the fly away from it. I remember the late Mr. Cheney passing rather a favourable judgment upon the flesh of a Canadian chub which had been carefully cooked imme-

4-5 EDWARD VII., A. 1905

diately after having been caught out of a cool stream, and the famous fishculturist was far from declaring it so unfit for food as some authorities have done. In this connection, one recalls Canon Kingsley's statement that a most accurate imitation of the chub may be made by taking one of Palmer's patent candles, wick and all, stuffing it with needles and split bristles, and then stewing the same in ditch water.

If Canadians do not prize the chub, or *ouitouche*, as it is called by the French-Canadians, as an article of food, they make considerable use of its flesh for bait. The smaller specimens are used whole for spinning and rolling, and the white flesh of adult fish is cut up into squares and employed in bottom fishing for *ouananiche*, pike, pike-perch, *touladi* or *namaycush*, and large brook trout.

Even Kingsley, too, admitted that in spite of the contempt in which they are generally held, they afford very good sport. There is certainly trouble enough taken to catch it, and all the early fishing books, as well as many of the more recently published guides for British anglers, devote considerable space to directions for taking it. It will be borne in mind that Walton, on account of its shyness, speaks of it as 'the fearfulest of fishes,' and I well remember how, as a boy, hour after hour was often vainly spent by me upon the banks of a tributary of the Trent, not far from Dove, endeavouring to seduce the chub from its clear pools with gentles, worms, and paste. I had not then attained to the dignity of a fly fisher, and it was indeed a prize to catch a chub.'

The distribution of the chub, both in Canada and the Northern States is very wide, the fish being often found in waters of such elevation that its existence in them would scarcely have been suspected. Trout waters in which none of these chub are to be found are much more highly esteemed by anglers and fishculturists alike than those containing them; for not only have the chub an unenviable reputation as eaters of the spawn of better fish than themselves, but they are fond of disappointing the trout fisherman by seizing his flies. This latter can usually be avoided by imparting a fairly rapid movement to the cast, and by keeping the flies pretty well upon the surface of the water, since it is usually some little distance below the surface that they are taken by the chub, and then when almost stationary, as in the case of fly fishing for whitefish.

In the North-west Territories, the common pike (*Esox*) occurs in many streams and lakes and, as I can personally testify, possesses there the most excellent flavour and table qualities. I do not know a firmer, whiter, more delicious fish than a small pike caught in October or November in Alberta or Saskatchewan, it contrasts greatly with the flabby somewhat muddy flavoured pike of eastern waters. Hence the pike is esteemed by westerners and is justifiably protected by special Dominion regulations in Manitoba and the west. In most parts it is detested and, if completely exterminated, many lakes and rivers would soon abound in the delicious whitefish, speckled trout and other species. It is referred to by Drs. Jordan and Evermann as follows: 'Its great size and fairly good game qualities made it a fish which is much prized by many anglers.' The important point should, never be lost sight of, that waters which will support only a few predaceous fish such as pike, &c., will maintain in a well-fed condition far more game fish of a less ravenous nature. Even a fine and robust fish like the maskinonge cannot hold its own against the pike. Both inhabit the same waters in the great lakes in localities such as the Bay of Quinte, the Thousand Islands, &c., but the general opinion prevails that the diminution of the more highly valued species, the maskinonge, is due to the pike, and that a reduction in the number of pike would give the young maskinonge a better chance and restore them to abundance. As one Kingston authority told me, a few years ago: 'Perch are more plentiful than ever in the eastern waters of Lake Ontario and off Kingston, while pike have also greatly increased; but the maskinonge has not been able to hold its own, and seems to be seriously diminishing.'

SESSIONAL PAPER No. 22

HOW TO GET RID OF PIKE OR JACKFISH.

It is necessary under such circumstances to adopt vigorous and effective measures, and the pike for various reasons can be readily reduced in numbers by unsparingly destroying the spawning fish and their ova. As Mr. J. Willis Bund has very pertinently pointed out: 'The first of the coarse fish to spawn are pike; and if it is desired to get rid of them, there is no time like the breeding season, for the pike then run up back waters and ditches and are easily taken by an expert. Netting for pike is always an operation the success of which is doubtful; but in February or March, with the snare—or even a gaff or spear much may be done to keep down the pike. Something may be done with a net. It is the best chance there is to destroy them, as they have got into places fitted for their destruction. Where it is desirable to kill down pike, all the ditches and backwaters should be carefully examined on a fine day in February or March*. There will then be no difficulty in seeing the pike. As soon as they have spawned, they drop back into the river; and very soon recover, probably on account of the quantity they eat. After April a pike out of condition is a rare fish. No other large fish are to be seen in ditches and back waters in the early spring.....Pike seem to remain in the ditches and back waters until there is a rise in the water, and then at once return to the river. They also come up from the river in a winter flood or high water. Pike are then always on the move, and those who know how to use that most poaching of all fresh water nets—a cleaching net—will best appreciate the way that pike in the winter floods make for the ditches. If the opportunity of killing down the pike in the winter and spring is neglected, there is but little chance of doing it during the rest of the year, as once they have recovered from spawning and returned to their old haunts, it takes a very expert fisherman to catch them with a net, and in nine cases out of ten he only does it by accident.' The capture of the female fish full of ripe spawn is the best step, as the somewhat viscid globular pellets—the spawn of the pike—is difficult to discern amongst the dark weeds in ditches and shallow creeks.

EXTERMINATION OF YELLOW PERCH.

Having referred at some length to the perch (*Perca flavescens*) very few further words are necessary. It is a most active predaceous fish and credited with devouring trout, whitefish, black bass and other valuable spawn. It also destroys much of the food upon which the better fish subsist. It has a habit of apparently driving off the schools of bass and taking possession of the grounds haunted, it may be for years before, by the bass, both for feeding and spawning. To net them out is most difficult, as they are most vigorous and alert, even during the spawning process. They thus readily elude nets when the attempt is made to enclose them, nor can they be gilled in quantities, as owing to the small head and high back they do not easily mesh, indeed, the only really effective method is the destruction of the masses of spawn after it is deposited. Where capacious traps or pound-nets are set, perch may often be entrapped in large schools, indeed one Port Stanley fisherman told me that at one lift of his pound-net in June, in Lake Erie, he had taken no less than 2 tons of perch, or certainly not less than 5,000 or 6,000 fish. Perch increase very fast, as ducks and other destroyers of fish-spawn find the glutinous bands of perch-eggs difficult to grasp with their beaks, and swallow. The slimy strings of spawn are, as a rule, deposited on flat shallows, on smooth sandy patches near shore or on shelving rocks and often near tree roots, and are transparent white in colour, like lace, though they soon become brownish owing to a deposit of fine mud. With a little practice these flat frill-like bands can readily be detected. Each egg is globular and possesses a triple egg-shell, viz., a thin, delicate innermost membrane, surrounded by a very thick, soft layer, streaked radially in a most remarkable way, and inclosed externally by a thin viscid layer. The eggs adhere together in the form of a band, like the egg-ribbon of the Angler (*Lophius*), except that instead of being flattened it has a bellows or folded angular arrangement, up the

* Mr. Bund, of course, refers to English waters in his pages.

4-5 EDWARD VII., A. 1905

middle of which there passes a space allowing of aeration. These jelly-like bands, in which the eggs are massed like the cells in a honeycomb, are heavy, and often lie in the bottom of still water like a long hollow frill in a circular or semicircular form. They are 2 or 3 inches across and 12 to 30 inches long, or may be 7 feet long, as in a specimen in the fish commissioner's tanks, Washington, D.C., U.S.A., which ribbon weighed 2 pounds 9 ounces after deposition, though the fish, with the eggs contained in it, only weighed 1 pound 8 ounces, showing the great amount of water imbibed by the egg-mass. Half a dozen men were able to readily scoop up with dip-nets a boat-load of the spawn in a few hours if once they became familiar with the slimy strings which abound in the shallow parts of lakes and in partly enclosed shallow creeks opening into rivers and lakes. The individual egg deprived of its slime measures only about 1-13 of an inch in diameter, and it hatches in a few days, the small fry being very minute and difficult to see in the water before the age of 8 or 10 weeks.

REMARKS ON THE CHUB.

Many fine sporting lakes abound with various species of chub, especially the handsome silver chub, roach, or corporal, often called the fall chub. In many localities it is called whitefish, and one well known salmon angler of great experience assured me that he hooked whitefish when fishing for lake trout and for bass in the upper Gatineau lakes. As a matter of fact, I found sometime afterwards that this so-called whitefish is the very large scaled silvery fall chub (*Semotilus corporalis*). It is the largest of the cyprinoids in eastern waters, weighing as much as 3 pounds (20 inches long). Mr. Louis Papineau is stated to have caught one 3½ pounds, and Mr. W. C. Harris, the well known United States authority, took one with a fly of 2 pounds weight. Its greenish or blue back, pearly white ventral surface and brilliant silvery sides, give it a handsome appearance, and it is easily distinguished from the smaller common chub, as the latter always shows a black spot at the base of the anterior margin of the back fin. It is not necessary to say that the chubs have not the small fleshy second fin which the whitefish possess in the back, towards the tail. Mr. C. W. Peck has said: 'The whitefish is an aristocratic fish, that will not bite a hook, and the propagation of that fish is wholly in the interests of those who use nets'; but as a matter of fact the true whitefish has been taken rarely by baited hook in Lake Winnipegosis. The fall chub fights a little when it takes the fly, and on the table its flesh is white, not quite so white as the whitefish, and of a delicate flavour, the bones being far less troublesome than its near allies the true suckers. I have known it (wittingly or unwittingly) served up as whitefish at sportsmen's clubs, and my own doubts as to its true character were decided by a visit to the club's freezer, where a heap of silvery fall chub awaited the cook's treatment to transform them into whitefish—and they make not a bad substitute. Thoreau was very far astray when he said that, 'it is a soft fish, and tastes like brown paper salted.'

The fall chub readily over-run sporting lakes, and it is easy to reduce their numbers by seining the crowded schools of parent fish on the spawning grounds, shallow bays, creeks and rivers. The seine may be 60 or 70 yards long, and of a mesh of 2¼ inches or 2½ inches, and will capture quantities of the spawning fish if swept over shallows in creeks or bays, or on a shelving shore where adjacent to weeds, &c., the chub deposit their eggs soon after the ice begins to disappear. The fish at such times crowd together, depositing their spawn like soft sago, which readily clings to weeds, tree roots, gravel, &c. Strong dip-nets scraped over such areas will often bring up the slimy spawn; but no method is more destructive than enclosing the breeding fish in a drag seine and hauling them ashore before they deposit their eggs. Similarly suckers can be easily cleaned out by netting these shallow places in creeks, streams of flooded meadows. The seining must be actively and continuously carried on, as the fish remain only a short time as a rule. In some localities the resident farmers annually carry on an effective, if not wholly legal destruction of these spring spawners. The fish, as Drs.

SESSIONAL PAPER No. 22

Jordan and Evermann say of the Buffalo sucker, 'soon disappear as suddenly and mysteriously as they came; but their brief stay has been long enough to permit great slaughter by the farmers of the surrounding country, who kill large numbers with pitchforks, clubs, and other primitive weapons, and haul them away in wagon loads.'

GERMAN CARP.

Of the carp, especially the German carp, it is not necessary to say much, though in the United States they have become very widespread and many authorities urge that war be waged upon them. Says a recent writer :—'Turn the spear loose on the carp and lake dogfish, and, for that matter, on the sucker also, as the almost total extermination of the maskinonge is laid at the door of the bony sucker. Of course, occasionally a game fish may suffer by being mistaken for a carp, but this should not occur often, and in case it does occur, they should be thrown back, even though they are sure to die. This will take away all incentive toward making such mistakes 'accidentally-a-purpose.' But we had better sacrifice a few mature fish to get rid of the spawn destroyer. Further, employ men to seine the lakes and allow them to market the carp, if they can find a market for them. If there is no fund to carry on the work, a small appropriation should be made, but at least do not protect the carp by law. An overseer should be appointed to look after the spearing.' At the close of this report I make reference to the desirable step of ensuring proper supervision of all netting for extermination purposes, as there is, of course, great risk to black bass and other esteemed fish, which may be netted in quantity at the same time. Such fish must, of course, be returned uninjured to the water. The evil effects of the carp pest were trenchantly set forth by a correspondent in the *New York Forest and Stream* not long ago. He said:—

'About twelve or fifteen years ago the private fish-pond idea swept over us, and unfortunately the government advised the stocking of these ponds with German carp, and even furnished the fish to do it. At first the people were pleased with the fish, and a large carp was considered a prize. As time rolled on, the people seemed to lose their great appetite for carp, until at present they rank but little, if any, above the dogfish. When the truth was learned, people opened the floodgates of their ponds and drained them either into the main waters or into tributaries leading thereto. The result of these careless, unthoughtful acts was to completely stock our lakes with carp. I personally know of seven such cases in my own vicinity.

'I venture to declare that at present there are more pounds of carp in our lakes than all other fish combined. I have grown up by the side of our lakes, and have observed with regret the change that is surely and rapidly being wrought by this worthless destroyer. In some of our lakes carp beds exist which are many square rods in extent, and poor luck, indeed, awaits the fisherman who drops anchor here. All the people are talking about the matter, and all foresee the end, but none are active.

'Our waters furnish fair bass fishing, but bass will absolutely not stay where carp have taken possession, therefore they have naturally crowded together in these sections and furnish fair fishing; but on the whole the bass are certainly decreasing in number.

'As carp will seldom take a bait, all fish that are caught are small and game fish, thus leaving the carp to increase indefinitely.'

PREDACEOUS CATFISHES.

The catfishes, of which over seventy species are found in the fresh waters of North America, are usually regarded as undesirable in waters suitable for better class fish. The nesting habits and the parental care exercised over the newly hatched young are well known. I referred to them in my report in 1896, p. 25, and need only point out that the use of the dip-net on the shallow areas, where their nests are made, will enable

quantities of the viscid greenish or whitish spawn to be secured, while the crowded schools of fry and like waggling black tadpoles can also be easily captured and destroyed. Of course the value of the catfishes in some places is considerable, and they afford a remunerative fishery, realizing per pound more than lake whitefish and other kinds; but wherever they happen to be regarded as pests, and as they are certainly spawn-eaters, the catfish can be reduced in numbers.

THE GRAYLING AS A PEST.

Perhaps the most remarkable case of a species regarded as a pest, and injurious to other esteemed fish, is that of the grayling (*Thymallus*). In its native waters it is one of the most cherished of game fish, and as a food-fish has a peculiarly high reputation. In European waters, especially the fine sporting streams of the north of England, the grayling are regarded as quite equal to trout, and in some respects a close approach to the salmon. It is in season when many of the finest game fish cannot be angled for. In northern parts of western Canada, as in the Yukon streams, the grayling is greatly valued, and in the United States, as in Michigan, sportsmen give it rank amongst the best game fish. Yet in Cumberland (England) it was voted a pest a few years ago. The local fishery authorities, in 1893, in the famous river Eden, where the salmon are of paramount importance, the conservators found themselves under the necessity of keeping down the coarse fish, some of which—*e.g.*, the pike, especially—are destructive to the fry of the more valuable fish for whose protection salmon boards were expressly called into existence. Among the fish against which the Eden Board thus waged war is the grayling—a fish of considerable repute in certain other rivers, where salmon are practically non-existent. The presence of these fish in the Eden is due to the introduction of three pairs of them into that river at Appleby some twenty-two years ago by an angler who had been enjoying sport in the grayling streams of Derbyshire. These half dozen grayling have multiplied to such an extent that the Eden Board, believing them to be prejudicial to the salmon, organized special expeditions for netting them out, and as many as 200 at a time were taken in this way. Assuming the facts to be correctly stated, they may fairly be adduced, in addition to the analogous cases of the carp and the perch.

BILL-FISH, OR BONY PIKE.

The bill-fish, or bony pike (*Lepidosteus*), and the bowfin or lake dogfish (*Amia*), are utterly worthless, and war may be justifiably waged against them. They must be seined out, when spawning in spring. The spawn of *Lepidosteus* forms long ropes of jelly several inches thick, twined about tree roots, &c., and, like the spawn of the bowfin, is not readily secured in quantity, hence the destruction of the schools of parent fish is the only effective method.

EELS AND THEIR EXTERMINATION.

Of all nefarious fishes the eel is most commonly complained against. 'Eels,' say the New York State fish commissioners, 1899, 'do the greatest injury by eating the spawn on the spawning beds as soon as the eggs are deposited. Lake trout spawn in the autumn, at night, on shoals, and at such times as the trout are on the shoals for the purpose of spawning the eels gather in large numbers, and have been seen eating the spawn almost as quickly as it is deposited, and before the parent fish can cover it with gravel. In such rivers as the Richelieu, in the province of Quebec, the market value of the eel is such that its extermination would be a serious loss to the fishermen, and by some of these men more protection is urged; but as a rule the eel is found to be more numerous than is desirable. I have seen it swarming in some maritime province rivers which, but for that pest, might be fine salmon and sea-trout rivers.'

SESSIONAL PAPER No. 22

It is now known that eels descend to the sea to spawn in the fall, and that the young fish after hatching remain at some depth in the sea, and then migrate in spring up main streams and their tributaries in vast schools. Whether the eels in lakes distant from the sea, such as the great lakes west of Niagara Falls, do so is uncertain, probably like the sturgeon they permanently remain and breed in fresh water. The use of eel-pots and traps is, very necessary in bass and trout lakes where eels become too numerous. The late Mr. Cheney referring to the prohibition of eel-pots in game fish waters in certain states, argued in favour of their use as effective means of getting rid of undesirable fish in sporting waters, and said:—

‘In one lake that I am familiar with that the state has stocked with a lavish hand, planting several species of the salmon family, there are mills on the outlet stream, and it is not uncommon when eels are leaving this lake to go down to the sea, for them to so clog the mill wheels as to cause a shut down to clear the wheels. Last fall an employee of the state spent some time on the lake examining the spawning beds of lake trout, and he reported eels, eels everywhere in abundance, wherever the fish congregated for spawning.

Early in the month of May I made a visit to Mr. August Belmont, at Babylon, L.I., where he has a trout preserve. While we were wading one of the inlet streams he asked the superintendent something about eels, and the man replied that he had taken a certain number, and I then found that eel-pots were set in the pond (there were six set when I was there, and Mr. Belmont gave directions to set six more), and upon returning to the house we rowed across the pond and lifted two of the pots, finding one eel, one bullfrog and one small pickerel (*Lucius reticulatus*). The pond is shallow, and is devoted exclusively to trout, but small pickerel have found their way into it, and of course eels cannot be kept out of it, although they are kept down by using the pots, and in all the history of the pond no trout have been taken in the eel pots. It simply confirms the position of those who think the state law should be amended to permit, under restrictions if necessary, the use of eel-pots in waters inhabited by trout. Eels are excellent food, and if pots should be permitted by law a sufficient number would be taken to materially reduce the hordes of eels that are, under the present law, devastating the spawning beds of trout. Another theory: If eel-pots will take bullfrogs and pickerel, by all means set them in trout waters that have become infested with pickerel, and the bullfrog is a spawn destroyer and is much more ornamental and useful served minus his body than alive in a trout pond. So that eel-pots will serve several good purposes if placed in waters that contain trout, and work no injury whatever to the trout themselves.’

I have elsewhere dealt with the question of the relative importance of esteemed and valuable fishes which may inhabit the same waters. Thus black bass in speckled trout waters, or lake trout in rainbow-trout waters, or sea-trout and brook-trout in salmon rivers, are often very injurious. But I need not in this place repeat the important points which in a former report I fully dealt with. Suffice it to say that as a lake will usually sustain far more trout than black bass, the latter fish is in that respect less desirable, and as sea-trout, &c., are most destructive to salmon spawn and fry, they should be thinned out by every justifiable means. I cannot, however, approve of a suggestion, made some years ago, that sea-trout might be killed by dynamite in the salmon pools of a famous New Brunswick river. The terrific explosions would have destroyed the salmon adults, grilse, smolts, parr and small fry, as well as eggs, and would have injured the river for many ensuing seasons. A similar recommendation was made more recently by a British Columbia fishery officer, who recommended that a quantity of salmon roe might be obtained from a cannery, and scattered in the pools where trout swarm. This bait would collect the trout, the worst enemy of young salmon, and then by dropping explosive cartridges amongst the trout, these fish would be destroyed. ‘This would also rid us of the chubs, which are as bad or worse than the trout,’ said the officer. In going up the river we fished for about ten minutes in one place, and could hook chubs as fast as we could throw out the line. To prove that

4-5 EDWARD VII., A. 1905

chubs are destructive to young salmon, I will cite an instance or two. Some years ago on Rivers Inlet, sixty-three salmon fry were taken from a single trout, and at Lake Washington, U.S.A., there were over seventy-one young salmon inside a chub. We have good reason to believe that a large part of the salmon spawn is devoured yearly by hungry trout, chubs, and other fish, and it behooves us to do all we can to destroy the destroyers of our most valuable species, the salmon.' That well known United States angling enthusiast, Mr. J. S. Van Cleef, wrote, in June, 1900:—

'Where suckers abound in a trout stream they are very destructive of the trout spawn. We made a practical test in regard to this on the Rondout, and found that where suckers had access to the spawn beds the eggs were almost entirely destroyed.

'The remedy which I have proposed is to permit the catching of suckers in our trout streams under such restrictions that the trout cannot be taken, and this might be done, especially during the spawning season of the suckers, under the supervision of a game director, or persons or clubs owning trout waters might be permitted to take out the suckers with nets upon giving a bond to the effect that if any trout are taken they shall be returned alive.'

But the trout themselves are in salmon waters a perfect curse, and Mr. William Sloan, M.P., himself an accomplished and enthusiastic sportsman, recently informed of a case where large British Columbia trout were crowding the breeding grounds on a well known salmon stream, and in the interior of one trout alone no less than 177 small salmon were found—a truly appalling slaughter of the innocents by one of their own, or rather a closely related family. The chub and the trout frequent the rapid and rippling waters chosen by salmon for their spawning purposes, and are even more dangerous than cat fish and similar species which no doubt feed largely on spawn: but habitually linger in slow muddy portions of rivers and creeks.

In all cases where serious danger to valuable fishes arises from less desirable kinds the most effective means is the use of drag seines of a sufficiently small mesh. Such nets can only be used under special official permission and under the superintendence of reliable employees, or if possible in the presence of a Dominion fishery officer. The permission of the Honourable the Minister of Marine and Fisheries must in all cases be first sought and obtained, as no interference with spawning fish or with fish in close times can be allowed excepting with such express permission from Ottawa.

III.

THE SCOTTISH HERRING CURING EXPERIMENT IN CANADA, 1904.

BY JOHN J. COWIE, LOSSIEMOUTH, SCOTLAND.

*With Prefatory Note**By Professor E. E. Prince, Dominion Commissioner of Fisheries, Ottawa.*

PREFATORY NOTE.

To all who are interested in the development of the herring fisheries and allied industries upon the Atlantic and Pacific coasts of the Dominion, the report which Mr. John J. Cowie, an experienced and well known Scottish herring curer and fisherman, laid before the Honourable the Minister of Marine and Fisheries on November 30 last, is of unique interest. Its great value to our Canadian fishermen and to all interested in the advancement of our Canadian fisheries cannot be questioned, and it is now presented, somewhat condensed and abbreviated, for general information. For many years I have urged the necessity of practical measures with a view to raising the reputation of Canadian herring to the high level of the Scottish, Norwegian and Dutch products, and various suggested schemes have been favoured. Indeed, it is fully sixteen years since a scheme was actually carried out, under which two delegates were sent by the Dominion Government across the Atlantic to thoroughly investigate and report upon the great trans-Atlantic herring fisheries, but it cannot be said that the report which resulted, had any very marked effect upon the Canadian herring fisheries and the methods of conducting them.

A more direct and potent method appeared to me to be necessary. I urged that instead of sending learners to Scotland, we should bring a teaching staff here. By such an object lesson it seemed to me any beneficial effects would not only be more emphatic, but would certainly be more direct and immediate.

The project, which Scotland carried out in 1750 with such admirable and lasting results to the great herring industry of that country, appeared to me not only the most feasible, but the most practical, and, in a very real sense, the most economical. Scotland imported experienced fishermen and curers from Holland in 1750, so that her people might learn the proper methods of capturing and of curing herring. The Scottish fishermen, herring girls and curing hands, even in England are at the present time for the most part, from Scotland. England is only just awakening to the great opportunity which she has long allowed to lie dormant. At an important Fisheries Conference, held last June in a Committee Room of the House of Lords, the President of the English Board of Agriculture and Fisheries, the Rt. Honourable the Earl of Onslow presiding, one of the principal delegates said: 'We recognize now in this country (speaking of England) that this, which used to be almost exclusively Scotch, is going to become quite as much English as it has been Scotch in the past. The amount of money which has been put into steamers and boats of every description, and dock buildings at great centres like Grimsby, Lowestoft, Shields, and elsewhere, all speak to this fact, that the fishing community of England are realising that the herring industry is going to be one of their main industries in the coming years. The Scotch have done very much to protect, encourage, and to make that fishery, and have given an example, for instance, to the Norwegians, and even to the Japanese.' If in Canada we can profit by the Scottish example, too, our herring fisheries have a great future before them. They are at present of an annual value of from two to two and a quarter millions of dollars per annum or less than one-third of the value of Scottish herring

fisheries in an 'off' year. The Rt. Honourable R. W. Duff in an address given in 1883, on the 'herring fisheries of Scotland,' estimated the value of the herrings cured in Scotland in 1880 as approaching nine and a quarter million dollars, and as 20 per cent of the Scottish herring are sold fresh, he claimed that the total quantity of herring cured and fresh taken on the coasts of Scotland in that year exceeded \$11,000,000 in money value—about half the value of the entire fisheries of Canada. Of course the season of 1880, it is only fair to state, was the most productive ever experienced, and it enabled the Scottish curers to export to various European countries more pickled herring than either the Norwegian or the Dutch, who are the chief competitors of Scotland in the business. The mode of cure is regarded by experts as being the chief factor in giving the pickled herring of any country its superiority, and there is no more remarkable circumstances in the economical history of nations than the passing from Holland to Great Britain and especially Scotland of the herring business. As already pointed out, the Scotch curers learned the method from the Dutch, who first pickled a brine-salted herring in 1307, and it was the herring caught on the coasts of Britain which the Dutch for many centuries chiefly relied upon, but the British herring almost entirely displaced the great staple of Holland in the markets of the world, and Norway later shared in this supremacy. 'Whilst the British herring fisheries' says an eminent Norse authority have marched with the stride of a giant since the day they were freed from the chain of bounties, the Dutch fisheries, once so famous have remained stationary. While Britain moved on, the old Netherlands fishery has seen year by year the number of its busses (or herring vessels with crews of twenty-five men) continuously decrease.' In 1650, the Dutch had 5,000 of these large decked fishing vessels or luggers usually called 'busses' fishing on the east coast of Scotland: but they declined as the British herring fleet grew, until about 50 years ago the Dutch again showed signs of advancement and their money value grew from \$240,000 in 1857, to about \$750,000 in 1887, and at the present time they are said to bring in an annual return of over \$2,000,000. It may be interesting, indeed, to give a comparative table of the annual value of the various national herring fisheries (the figures being for the year 1902).

Scotland.....	\$6,802,000
England and Wales.....	5,474,800

(The English east coast produced of this total no less than \$5,185,000).

Holland.....	2,956,138
France.....	2,353,800
Canada.....	2,250,000
Norway.....	1,805,000
Denmark.....	265,000
Newfoundland.....	250,000

Of course the annual values fluctuate, but the supremacy of the Scottish herring in the markets of the world has been maintained chiefly owing to its high qualities as a food product. The demand for the best grades of cured herring is enormous, as the following figures sufficiently show, and the rapid rise recently of the Dutch and German herring is noteworthy in recent years, though it must be stated that considerable quantities of Scottish cured herring, after being imported into Holland, are marketed as the best Dutch fish:

	1899.	1900.	1901.	1902.
Great Britain	1,007,000	1,152,000	1,395,000	1,652,000
Norway.....	392,700	570,000	415,000	555,000
Holland.....	278,000	415,000	520,000	723,000
Germany	57,397	96,132	133,417	170,000
Sweden.....	9,300	6,000	3,000	3,000
Total.....	1,744,397	2,239,132	2,466,417	3,103,000

SESSIONAL PAPER No. 22

The foregoing facts indicate clearly, if they indicate anything at all that Canada has an opportunity such as no other country possesses of establishing herself as one of the great cured-herring countries of the world, if only the method of curing and placing the fish on the market be such as to fulfil the necessary conditions. Just as Scotland rose to the high position as a pickled-herring producing country, and for so many years displaced Holland, so Canada may by taking proper means rise to the forefront in this great and profitable enterprise.

Mr. Cowie's experiment has proved that the quality of Canadian herring is all that can be desired and from his report it is clear that the conditions necessary to gain for our pickled herring the highest repute and the most remunerative prices are:—

- (1.) Gutting and curing as soon as possible after capture.
- (2.) Separation and proper selection of the fish according to grade. Mixed fish are not in chief demand.
- (3.) Use of the right kind and quality of salt.
- (4.) Proper packing for shipment to market.

The other details, which tend to result in the best product, are subsidiary to these, though the determination of the movements of the schools in successive weeks of the season, the use of appropriate nets and gear and the aid of steam in capturing the fish are all matters of moment.

It remains to be seen if experimental packs at various points on the Atlantic coast and the tuition of local hands will stimulate the fishing population to improve the Canadian herring shipped to market, and the interesting project of putting up the Pacific fish in a method more in keeping with the best European methods, will not raise the British Columbia herring in the estimation of the great markets of the east and of the Antipodes. Certainly no more zealous and able expert in the matter could have been entrusted with the experiments than Mr. Cowie, and his staff of Scottish fisher girls, and fishermen—coopers and other hands impressed all who saw them as the best that could be got. The aim of the Hon. the Minister of Marine and Fisheries will be fulfilled if within the next few years the pickled herring of Canada establish a reputation in the world's markets as not inferior to the Scottish, Norse and Dutch products which are in such large demand.

E. E. PRINCE,

Dominion Commissioner of Fisheries.

THE SCOTTISH HERRING CURING EXPERIMENT IN CANADA, 1904.

By MR. JOHN J. COWIE, LOSSIEMOUTH, SCOTLAND.

The following report upon the herring curing experiment conducted by me at Canso, Nova Scotia, during the summer and autumn of the past year (1904), contains the substance of the detailed report which I addressed to the Hon. Raymond Préfontaine, Minister of Marine and Fisheries, in November last. The experiment was carried out under the instructions of the hon. the minister, who followed it with unflagging interest.

PRESENT MARKET REPUTE OF CANADIAN HERRING.

It has long been admitted that herring caught in Canadian waters have in the past been, and still are, practically shut out of the best markets of the world in which herring from the United Kingdom, from Norway, and from Holland, find ready sales at good prices.

4-5 EDWARD VII., A. 1905

FRESH HERRING OF EXCELLENT QUALITY.

Many recognized authorities have expressed the opinion that Canadian herring, in a fresh state, are equal in quality and flavour to any herring caught on the other side of the Atlantic, and that if different methods of curing were introduced there is no reason why Canadian herring could not be placed on any market of the world and enter into successful competition with Scotch, Norwegian or Dutch herring.

Many, on the other hand, have maintained that the excellent flavour characteristic of herring caught on the other side of the Atlantic is lacking in the Canadian herring, and that no new methods of curing would gain for them a place in the cured herring markets, in competition with Scotch and other European herring.

THE EXPERIMENT ARRANGED.

To prove beyond question whether the cause of Canadian herring being debarred from the best markets was to be found in the methods of curing at present in vogue, or in the alleged want of flavour in the fresh herring itself, you authorized and instructed me to bring to Canada, from Scotland, a modern herring fishing steamer, with Scotch fishermen, and fully equipped with Scotch herring nets, for the purpose of carrying on deep-sea drift-net fishing for herring off the Canadian coast, in the manner it is carried on round the British Isles.

You further authorized me to bring to Canada a small Scottish herring-curing staff, to cure herring with the same grade of salt and market them in the same class of barrels as those which are in use in the Scottish fisheries.

The importance of the step you have taken, and that it is in the right direction is shown by the following extract from an address read by Mr. Tidmarsh before the Maritime Board of Trade convention at Moncton, N.B., in August, 1904:—

Referring to the herring fishery of the Gulf of St. Lawrence generally and to Prince Edward Island particularly, he says : ‘ The herring fishery is a source of wealth which is almost absolutely ignored, and yet I believe in time it will become one of the chief sources of revenue to Prince Edward Island, and portions of the Gulf of St. Lawrence.

‘ There is no fish that swims in the sea so popular as the herring, none for which there is such a great demand.

‘ The herring fisheries of England, Scotland and Norway are reckoned among the chief industries of those countries. It gave employment to thousands of people, and millions of dollars find profitable investment in it.

‘ The trade journals of the United States from time to time make mention of the fact that the demand for herring is increasing at an enormous rate every year, and at times it is difficult for dealers to supply the demand.

‘ Large consignments of herring from the United Kingdom and Norway arrive in New York every week, where they find a ready market at good prices.

‘ We have the herring here as good, I believe, as the Scotch or Norwegian herring, if we employed the same methods of curing. Why should Canada not get a full share of this trade ?

‘ From inquiry and personal observation, I am satisfied that the shoals of herring that approach the Atlantic shores of Canada in the early spring to spawn, remain at no great distance from the coast, during the summer and until very late in the fall.

‘ That these fish could be taken in large quantities by employing the drift-net fishing system, such as is used in Scotland and Norway, I have not the slightest doubt, and the fish are as good as those taken in any part of the world, if they were cured and prepared for market in the same way.

‘ I am strongly of opinion that the introduction of the deep-sea drift-net system so successfully employed in Scotland and Holland would be the beginning of a new era in the history of the gulf fisheries, not only would the herring fishery be developed, but the mackerel fishery might thereby be restored to its former state of productiveness.’

SESSIONAL PAPER No. 22

STEAM HERRING DRIFTER PROCURED.

On receipt of your instructions then, I at once proceeded with the hiring of a steamer, and the engaging of a crew, and curing staff in Scotland.

I was fortunate in securing from the Smith's Dock Trust Company, of Great Yarmouth, England, one of the best of their large fleet of steam herring drifters, *Thirty-Three*, a staunch little steel boat fitted with all the latest improvements and appliances for carrying on deep sea herring fishing.

It is only within the last seven years that steamers have been successfully used for herring fishing in Great Britain.

STEAM VS. SAIL BOATS FOR HERRING FISHING.

Previous to the advent of the steam drifter, herring fishing was carried on entirely by sailing boats, and in following the large bodies of herring, sometimes as far as 60 or 80 miles from shore, fishermen began to realize that with sailing boats they could not take full advantage of the shoals of herring on the off shore grounds, nor could they with any degree of certainty land their catches in that fresh condition which is absolutely necessary, both for curing and kippering purposes, being frequently delayed alike by calms and head winds.

Owing to the greater initial expense of the steam drifter, the majority of Scottish fishermen still, however, prosecute herring fishing in sailing boats.

As showing the superiority of the steam drifter in herring catching, I take as an instance the result of the enormous herring fishing of this year around the Shetland Islands.

Steam drifters constituted only one-fifth of the whole fleet operating around these islands, the other four-fifths being sailing boats, yet this small proportion of steamers landed three-fifths of the total quantity landed for the season, besides bringing the fish to land in a fine fresh state, thereby obtaining much higher prices than the sailing boats.

CREW AND GEAR OF STEAM DRIFTER.

The crew of *Thirty-Three* consisted of five Scotch fishermen, an engineer and a fireman, with a certificated navigator for the navigation of the steamer across the Atlantic.

This crew brought the steamer to Canada, and on her arrival two Nova Scotia fishermen were shipped to make up the full crew for fishing. As the services of the navigating officer were only required for the Atlantic voyage, he, on the arrival of the steamer at Canso, was sent home.

Three of the Scottish fishermen provided the outfit of nets.

They brought with them in all 150 nets, with the necessary ropes, and floats for conducting drift-net fishing.

In the fleet of 150 there were nets of various sizes of mesh, from 2 inches to 2½ inches.

STAFF OF HERRING GIRLS.

The curing staff, on shore, consisted of six girls, well skilled in the gutting, selecting and packing of herring in the Scottish fashion, and a competent Scotch cooper.

As Canadian herring barrels are not sufficiently well made and are, indeed, so unfitted for the best grades of cured herring, that they could not be used for the pur-

4-5 EDWARD VII., A. 1905

poses of the experiments, it was found necessary to import Scottish whole and half barrels, strong, well-made and capable of carrying herring satisfactorily to any part of the world. This will be unnecessary in future, as equally strong well-made barrels can now be produced in Canada.

BEST SALT NECESSARY.

I also found that the grade of salt used all along the coast of Canada was quite unsuitable for the proper curing of herring, consequently a supply was ordered direct from Liverpool of what is known as '2nd fishery Liverpool salt' and which is almost entirely used in Scottish herring curing. This is a very important matter in herring curing, and may either make or mar the chances of cured herring finding a good market.

VOYAGE ACROSS THE ATLANTIC.

Having secured a steamer, a crew, and a curing staff, I, along with the crew, proceeded from Lossiemouth to Great Yarmouth, on April 25, to take over from the Smiths' Dock Company their steam drifter *Thirty-Three*.

After thorough examination of the vessel and her furnishings, and on finding the same in good and perfect order, we sailed for the Tyne, and there took on board coal for the voyage to Canada. From thence we proceeded to Lossiemouth and put on board the fishing gear and other effects of the fishermen.

On May 4, in beautiful weather, the little steamer sailed from Lossiemouth, Scotland, on her long voyage across the North Atlantic.

Large crowds had gathered round the harbours to see the start, and to wish the crew a good and safe voyage. As the vessel steamed away the remark was freely made that if the experiment was not successful it would not be the fault of either the steamer, her crew and equipment, or the curing staff, for a better outfit for the purpose could not have been sent from the shores of Scotland.

Passing through the Caledonian canal, a stop was made at Castlebay-Barra, in the outer Hebrides, to replenish the coal bunkers.

Leaving Castlebay on May 11, rough weather and head winds were encountered most of the way across the ocean, which severely tested the seaworthy qualities of the little craft, deeply laden as she was with coal.

Nevertheless, on the morning of May 30, the staunch little craft sailed into Canso harbour, none the worse for the long and stormy passage.

On her arrival, she was visited by large and admiring crowds.

The curing staff, along with myself, sailed from Glasgow on May 7 by the Allan liner *Sicilian*, reaching Quebec on May 17 and Canso on May 19.

On the arrival of the staff at Canso, preparations were at once made for herring-curing operations on shore in a most suitable shed belonging to Messrs. A. N. Whitman & Son, so that, by the time the drifter arrived, everything was in readiness for beginning work.

As already stated, the drifter reached Canso on May 30; here two local fishermen were shipped, one as a pilot and assistant fisherman, and the other as cook and assistant fisherman.

OPERATIONS COMMENCED.

After putting on shore all the spare fishing gear, and getting things fixed up and put in shape for fishing, a start was made on June 3 for the Atlantic fishing grounds—

SESSIONAL PAPER No. 22

or I should rather say, to find out the fishing grounds on the Atlantic, as the important annual resorts of the herring are not known as yet—with fifty nets on board, so that very little time was lost after the arrival of the drifter at Canso.

METHOD OF HERRING DRIFT-NETTING.

Drift-net herring fishing is carried on between sunset and sunrise. The vessel leaves the harbour in time to reach the desired fishing ground before sundown.

On arrival there, the nets, which have been previously tied together and carefully laid in the hold of the vessel, are put into the water, while the vessel is moving at the rate of about three knots an hour. When the whole fleet of nets is in the water it forms one continuous wall about $1\frac{1}{2}$ miles long.

The 'wall' is invariably set across the tide, so that the meshes may be kept perfectly open during the time the nets are in the water, also because bodies of herring as a rule move with the tide, and here I would point out that in drift-net fishing it is necessary to have a knowledge of the movements and direction of the tides, as well as to have a knowledge of the fishing grounds in deep water.

The fleet of nets is secured at one end to the vessel, the other end being loose, so that the vessel and nets move together with the tide, hence the term 'drift-net fishing.'

To guard against danger from passing vessels, a sheepskin or canvas buoy is attached by a line, three to four fathoms long, to the place where each net is tied to the other, along the whole fleet. The top of the nets is thus about 20 feet below the surface of the water.

Along the bottom of the fleet runs a stout rope called a 'messenger,' which is attached temporarily to the foot of each net.

This rope, besides acting as a sinker for the nets when in the water, is hauled in by a steam capstan, thereby taking the strain off the yarn, and making the hauling of such a long string of nets comparatively easy.

HAULING THE NETS.

Just before sunrise a start is made to get the nets on board. It generally takes from three to four hours to haul a fleet of nets. As soon as the nets are in all speed is made to get to land with the fish, so that curing may be started with the least possible delay, every moment of delay being serious.

On reaching port the herring are discharged into square shallow vats, and sprinkled with salt.

The gutting girls are ranged round the vats, and the gutting, selecting, or grading, and packing of the herring then commences.

Three girls work together and form what is called a 'crew.'

Two stand at the vat and continue gutting, and selecting, while the other packs the selected fish. The gutting, selecting, and packing, goes on simultaneously.

So carefully have the different classes of herring to be separated, and the poor and unsound fish to be excluded, that trained coopers continuously supervise this operation.

In all catches of herring there are always to be found fish that are not fit for curing.

AREA OF FISHING OPERATIONS.

On June 3, then a commencement was made from Canso with the drift-net fishing.

Although Canso was made the headquarters of this experiment, it by no means follows that only the waters adjacent thereto were fished.

4-5 EDWARD VII., A. 1905

From the following record it will be seen that a large extent of ground, or rather water, was covered, namely: from off Isaac's Harbour, N.S., east to Scatari, C.B., on the Atlantic coast, at a distance of from 10 to 50 miles from shore, and through the strait of Canso, from St. George's Bay, up to ten miles north of east point Prince Edward Island.

I give here a record of the various fishing grounds tried, and the result in each case.

Date.	Fishing Ground.	Quantity caught.	Quality.
June 3.	17 miles S.E. of Canso.....	3 crans*	Fine large herrings.
" 4.	17 miles E. by N. of Canso..	"	Mixed with small.
" 7.	50 miles S. "	"	Very large and fat.
" 8.	15 miles S. "	"	Large and fat.
" 9.	16 miles W.S.W. "	4 "	Fine large; some small.
" 10.	" "	1 "	" "
" 11.	" "	1 "	" "
" 14.	38 miles E. $\frac{1}{2}$ S. "	6 "	Very fine.
" 15.	24 " E. $\frac{1}{2}$ S. "	4 "	Mixed.
" 16.	24 " E. $\frac{1}{2}$ S. "	2 "	"
" 17.	47 " W.S.W. "	1 "	"
" 21.	45 " W.S.W. "	"	Large.
" 22.	20 " S. "	"	"
" 24.	40 " E. by N. "	1 "	"
" 25.	25 " E. by N. "	1 "	"
" 27.	40 " E. by S. "	"	Many dog-fish; no herring.
" 28.	80 " E. by S. "	"	" "
" 30.	68 " E.S.E. "	"	" "
July 5.	Off Arichat.....	"	" "
" 9.	Off Point Michaud....	"	" "
" 12.	Off Queensport.....	3 crans	Very young herrings.
" 13.	"	1 "	"
" 14.	Canso Bank..	"	No herring.
" 15.	Between Mabou, C.B., and P.E.I....	"	Small herring, a few.
" 16.	Off Cape George.....	$\frac{1}{2}$ crans	Young herring.
" 19.	Crouse Bank	"	Many dog-fish; no herring.
" 20.	16 miles S.E. of Canso ..	"	" "
" 22.	Off Gabarus, C.B....	"	" "
" 23.	Off St. Esprit, C.B	"	" "
" 25.	Off Isaac's Harbour, N.S ..	"	" "
" 29.	Off Whitehead, N.S.....	"	" "
Aug. 2.	Crouse Bank	"	" "
" 3.	St. Peters Bay ..	1 $\frac{1}{2}$ crans	Large herring.
" 4.	"	"	Dog-fish; no herring.
" 5.	30 miles E. by N. of Canso.....	"	"
" 8.	40 " "	"	"
" 10.	10 " S. of Canso	"	"
" 12.	Off Whitehead	"	"
" 16.	25 miles S. of Canso.....	"	"
" 18.	Off Isaac's Harbour ..	"	"
" 23.	10 miles N. of East Point, P.E.I....	"	"
" 24.	Off Pictou Island.....	"	Many dog-fish; no herring.
" 25.	Off Port Hood, C.B	"	" "
" 26.	Off Cape George.....	"	" "
" 29.	Canso Bank.....	"	" "
Sept. 1.	Off St. Esprit, C.B.....	"	" "
" 2.	Chedabucto Bay.....	"	" "
" 5.	Off Liscombe, N.S.....	"	" "
" 6.	Off Isaac's Harbour	"	" "
" 12.	Off Beckerton.....	"	" "
" 19 to 24	Off Georgetown, P.E.I., Port Hood, C.B., and off Pictou Island, N.S ..	"	" "

* A cran equal to two barrels.

DOGFISH PEST STOPPED FISHING.

From the foregoing record, it will be seen that after June 25, dogfish took possession of all the fishing grounds, and no herring could be got anywhere,

SESSIONAL PAPER No. 22

excepting on August 3, in St. Peter's Bay where a few fine large herring were caught.

The very next day dogfish appeared and the herring were gone.

LATE START AND LIMITED CATCH.

The catch as you will observe, has been exceedingly poor, caused partly by the extraordinary abundance of dogfish from June 25 till the time operations were finished, and partly by our being too late in starting this year to get the benefit of the early fishing, together with the want of intelligent information as to the movements of herring on this side of the atlantic.

Of the total catch, $25\frac{3}{4}$ crans, or 51 barrels, as counted in Canada, 8 crans, or 16 barrels were disposed of for bait to local fishermen.

These were mostly very large, coarse herring, and herring otherwise unfit for curing, separated during the process of gutting and packing.

In Scotland or elsewhere all herring caught are not fit for curing, a proportion are rejected as unsuitable.

SAMPLE SHIPMENTS MADE.

Of the remainder, half a barrel was smoked and made into kippers, 34 half barrels were cured in pickle, of the latter 1 half barrel went to Halifax, N.S., 11 half barrels to New York, and 22 half barrels to St. Petersburg, Russia.

MESH OF NETS SUITABLE.

The opinion has been freely expressed that the meshes of the nets used were too small to capture the large herring commonly found in Canadian waters, that is a fallacy.

In the first place, the herring in Canadian waters are not all large any more than those round the British Isles, but are mixed with medium sized and small, like herring in other places.

If, as is alleged, the mesh was too small, why is it that such an enormous quantity of herring was landed in the Shetland islands this year, and caught by exactly the same nets as were used in Canada by the drifter? And, it must be noted, these Shetland herring average 14 inches in length.

LARGE MESH USED.

On July 19 I was directed by you to get some larger meshed Canadian nets, for fishing along with the Scottish nets, in order to prove whether or not it was owing to the size of the mesh that more herring had not been caught.

I accordingly got, from Halifax, 3 Canadian herring nets with meshes of 3 inches, $3\frac{1}{4}$ inches and $3\frac{1}{2}$ inches, respectively, and had them mounted and used along with, and in the fleet of Scottish nets.

The only occasion on which any herring were caught after using the large meshed nets was on August 3, when $1\frac{1}{4}$ crans of large herring were got, and, strange to say, these were all caught in the smaller meshed Scotch gill-nets. The Canadian nets, owing to the largeness of the mesh, being simply loaded with dogfish, in fact, the weight of dogfish was so great in one of these nets that a rope had to be passed around the middle of the net and the steam capstan used to hoist it bodily out of the water.

From this date until operations were finished the large meshed nets were in constant use, but no herring were caught in them.

FAILURE OF SUMMER AND FALL RUNS.

This, I think, is conclusive proof that the cause of the failure of the drifter to catch a larger quantity of herring, was not to be found in the size of the mesh, but

4-5 EDWARD VII., A. 1905

rather, as I have already said, in our being too late for the early and most plentiful run of herring, the tail end of which we seem to have got in June, and the total failure of the summer and fall runs, owing, in my opinion, to the superabundance of dogfish all through the season.

Possibly the result of the first year's operations may be looked upon by those having little or no knowledge of herring and herring fishing, as somewhat ominous and unfavourable.

To those I would say, peruse the special report, 1898, on 'The Fluctuations in the Abundance of Fish,' by Professor E. E. Prince, Dominion Commissioner of Fisheries, (Department of Marine and Fisheries, 31st Annual Report).

As every one knows who lays any claim to a knowledge of the fisheries, a failure of herring fishery, especially in any particular locality along the coast, should not be a matter of too serious concern, but should be regarded with equanimity, and even anticipated at recurring periods.

SUPERIOR QUALITY OF JUNE FISH.

While it is a matter of regret to have to report that the number of barrels cured has been small this year, I am pleased to inform you that I found the herring taken in June to be, what are known in Scotland as 'Matjes,' that is, peculiarly well flavoured, fat herring, with the roe and milt undeveloped.

'MATJE' AND 'FULL' HERRINGS.

In Scotland we find two distinct classes of herring.

On the west coast, only, around the outer Hebrides, and on the north-west coast of Ireland quite recently, are found those delicious 'Matje' herring which commonly sell at 80 marks in Germany (20 dollars), and 40 roubles in Russia (20 dollars) per barrel.

This fishery is limited and is only carried on from the beginning of May till towards the end of June, when the roe and milt begin to form and the distinctive flavour of the fish is lost.

On the east coast no 'Matjes' are found, but only what are known as 'full' herring, that is herring with the roe and milt fully developed, and not fat.

These do not bring such high prices as the 'Matje' herring, but the demand for them is practically unlimited, and immense quantities are caught and cured.

Strange to say those 'Matje' herring of the west coast when they have developed roe and milt, do not lend themselves so well to curing as the roe and milt-herring of the east coast; and this is the more remarkable when it is borne in mind that the distance between the fishing grounds is, in some cases, less than 100 miles.

PRIZED 'MATJES' APPEAR TO OCCUR IN CANADA.

I have been too short a time on this side of the Atlantic, and too little has been done this year for me to make positive statements with regard to the correspondence of the herring season on both sides of the Atlantic, whether they are simultaneous or not; but judging from the little that has been found out, I believe that 'Matje' herring of a very fine quality are to be got at a distance of from 8 to 10 miles off the coast, from Whitehead, N.S., as far east as Scatari, C.B., at a time, coinciding exactly with the 'Matje' herring fishery of the west coast of Scotland.

This is the class of herring we got there in June, and points to this conclusion.

SUCCESS OF SCOTTISH CURED CANADIAN HERRING.

The primary object of the experiment however was to show that by the application of the Scottish method of curing, Canadian herring could be placed in markets

SESSIONAL PAPER No. 22

from which they have hitherto been practically excluded, and where they could be sold at prices equal to Scotch, Dutch, or any other herring.

With regard to the consignment sent to New York, the following letters from one of the oldest and most reliable salt fish firms in that market, show how favourably these Scotch-cured Canadian herring have been received, and their anxiety to get more.

(a)

NEW YORK, July 6, 1904.

Mr. John J. Cowie,
Canso, N.S., Can.

DEAR SIR,—We are in receipt of your favour of July 4, and we are pleased to note that have forwarded 11 half barrels 'Matjes' by SS. *Prince Arthur*, July 5.

We await the arrival with keen interest and will report to you.

Yours very truly,

THOS. WOODWARD & SON.

(b)

NEW YORK, July 12, 1904.

Mr. John J. Cowie,
Canso, N.S., Can.

DEAR SIR,—We beg to advise you that we are in receipt of the 11 half barrels of 'Matje' herring, and we are agreeably surprised at the quality and condition, as a good many of these goods that have been packed after the Scotch method have turned out badly.

We think we can sell the extra large 'Matjes' for \$5.50 per half barrel, and the large at \$5.

We think it far best to clean them up at this, although we are testing the trade and trying to do better.

We wish you would let us hear from you in regard to more of these herring, as we would like to introduce them to the trade generally, and we wish you would let us know by return of mail, whether you will be able to send any more 'Matjes,' and we should also like to hear from you in regard to new 'fulls' and large 'fulls' and when you could make a shipment of some.

We think without question these goods will sell in this market.

Yours very truly,

THOS. WOODWARD & SON.

(c)

NEW YORK, August 19, 1904.

Mr. John J. Cowie,
Canso, N.S., Can.

DEAR SIR,—What are the prospects on herring? Do you expect to ship us any more goods and have you cured any 'fulls'? We are very much interested in this herring experiment and would like to hear from you fully regarding the above and regarding future business.

Yours very truly,

THOS. WOODWARD & SON.

FAVOURABLE NEW YORK OPINION IS CONVINCING.

In face of the prejudice previously existing in this market against herring from Canada, this, I think, is ample testimony to the good qualities of Canadian herring, when properly handled, selected, and cured in strong, tight barrels. It is certainly most gratifying and encouraging to those who believe that the Canadian herring industry may be improved and at least doubled in value.

Although the consignment was small, still 10 barrels are as good as 1,000 to demonstrate that the reason why Canadian herring have been ignored in this important market, is entirely owing to the careless and unsystematic way curing has been carried on in the past, and the want of knowledge of how to place cured herring on this and other markets in such a condition as would create an increased demand at enhanced prices.

RUSSIAN CONSIGNMENT VERY FAVOURABLE.

Turning to the Russian consignment, the following letters concerning the same were received from Mr. H. J. Pallisen, the oldest and largest importer of cured herring in St. Petersburg :—

(d.)

ST. PETERSBURG, July 20, 1904.

John J. Cowie, Esq.,
Canso, Nova Scotia, Can.

DEAR SIR,—We are in due receipt of your favour of July 6, enclosing bills of lading of 22 half barrels of herring shipped to our care for sale, via Halifax-New York.

We shall do our best for sale of this parcel, advising you of prospects of these herring in our market.

Your faithfully,
THE ADMINISTRATION OF H. J. PALLISEN.

ST. PETERSBURG, August 21, 1904.

John J. Cowie, Esq.,
Canso, Nova Scotia, Can.

DEAR SIR,—Referring to our respects of July 21, we herewith beg to inform you that your herring ex-SS. *Silvia-Dagmar*, after being bracked brought a net number of filled up barrels as noted at the foot.

The quality of these herring, which we find much like Downingsbays, would suit our market very well, and there will no doubt be a good outlet for them here if you could get them forwarded by a safer route.

The herrings have suffered considerably on the passage, four half barrels being totally spoiled and condemned, and the balance over-heated and consequently torn-bellied.

The parcel was shipped from Copenhagen on steamer's deck, and as weather has been very hot during the last eight or ten days, they have no doubt suffered on this route.

We shall do our best for sale of this parcel and send you account of sales and remittance to Canso.

Your truly,
THE ADMINISTRATION OF H. J. PALLISEN.

Marks.	Number of brls. shipped.	Number filled up.
Extra large matjes.....	8	6
Large matjes.....	14	10
	<hr/> 22	<hr/> 16

SESSIONAL PAPER No. 22

There is a system existing in Russia of what is termed there, 'bracking,' that is, on the arrival of a parcel of herring the heads are taken out of the barrels, the pickle drawn partly off and a tier, and in some cases two, of herring added to each barrel, consequently the number of barrels actually for sale is less than the number shipped.

During the 'brack,' herring which have been spoiled in transit or otherwise found unfit for consumption as food, are condemned and destroyed.

In this case four half barrels were condemned owing to overheating on the passage up the Baltic, while two half barrels were required for upfilling the others.

Since the receipt of the foregoing letters, H. J. Pallisen has been instructed to send account of sales and remittance to the Deputy Minister of Marine and Fisheries, Ottawa.

It will thus be seen from the report of H. J. Pallisen that the quality of these herring, notwithstanding the fact of their having been damaged en route—and a safer transit can easily be found—was pronounced to be equal to the quality of the very best herring on the Russian market, namely, 'Downingsbays.'

The herring called 'Downingsbays' are the 'Matje' herring, I have already referred to, which are caught on the north-west coast of Ireland during May and June, and cured by Scotch curers. They frequently sell at the incredibly high figure of 50 roubles or 25 dollars per barrel, and quite commonly at 40 roubles, or 20 dollars.

OPENING IN GERMANY.

With respect to the German market where millions of barrels of 'full' herring are consumed annually although at a lower price than the 'Matje' herring, we were unfortunately unable owing to the failure of the 'full' herring fishery, on the north and east coasts of Nova Scotia, and around Cape Breton, to test these, but the following extract from a letter I received from Mr. H. Berneaud, of Stettin, Danzig and Königsberg, a very large importer of cured herring into these markets, on hearing that a herring curing experiment was to take place in Canada, which, in passing, shows the wide interest being taken in the attempt at developing the Canadian herring fishery.

Mr. Berneaud says:—'About 30 years ago I imported into Stettin already, Canadian herring, 50 barrels and then 100 barrels. They were bought in Dublin and re-shipped to Stettin via Leith, and sold as Scotch herring, though the buyers had their great doubts, owing to the make of the barrels, at equally good prices, herring being scarce at the time and the demand keen. The herring I imported were equal in size to 'Crown Fulls.'

I heard later on that a sailing cargo of about 2,000 barrels was afterwards sent to Hamburg, but these being of inferior quality and mixed sizes, not being selected, did not find buyers, and I have no idea how they were ultimately disposed of, maybe as manure. This shows that good, well cured, and properly selected Canadian herring can be sold in Germany, and I believe better in the Baltic, (Stettin, Dantzic, Königsberg) than in Hamburg.'

CANADIAN DEMAND IN ADDITION TO FOREIGN.

Apart, however, from the outlet for Canadian herring in foreign markets, there is, as is well known, a large demand throughout Canada which can be increased and made doubly remunerative by the adoption of better methods of curing.

Letters were received, during the summer from all parts of Canada requesting sample shipments of our cure, which, unfortunately, could not be made this year.

It is not only in the markets of the United States that Scotch and Dutch herring bring double the price of Canadian herring, including the famous Labrador herring, but in the markets of Canada as well.

I find, for instance, in a report of the Quebec market, dated September 29, 1904, No. 1 Labrador herring quoted at \$3 per half barrel, while Holland herring and Scotch herring, in the same market are quoted at \$6.50 per half barrel.

4-5 EDWARD VII., A. 1905

DEMAND FOR KIPPERS.

Besides the foreign trade in cured herring there is throughout the British isles a large trade in what are known as kippers.

These are fresh herring split, lightly salted, and smoked for a few hours, to be used for consumption within 7 or 8 days after being smoked. The best kippers in the British market are made from the fat 'Matje' herring caught on the west coast of Scotland and Ireland, which I have already referred to. I found that the 'Matjes' we got on the Nova Scotia coast also made very fine kippers.

A few of these 'Matjes' were smoked (8 boxes) and sent to Montreal and were pronounced delicious. One great essential point in making kippers is to have the herring in a perfectly fresh state to make savoury kippers.

I have seen in Canada, herring, which had been a fortnight in salt, made into kippers. No one need expect any demand for such as these.

MOVEMENTS OF CANADIAN HERRING MUST BE ASCERTAINED.

Although it is satisfactory to find that the few herring we were enabled to cure and place on markets, as yet unopened to Canadian herring, were well received, before beginning to introduce the Scottish system of curing, and instructing the fishermen of the maritime provinces therein, with any hope of making a permanent improvement, more reliable information is needed with regard to when the various classes of herring are on the coast, and whether they are in condition for curing.

SHIPMENTS MUST BE RELIABLE, A NEWFOUNDLAND WARNING.

The experience of Newfoundland in the introduction of the Scotch method of herring curing, should be a warning and a guide to Canada in setting about the improvement of the herring industry.

For a good many years Newfoundland has been exporting Scotch cured herring. At first good markets were found. Soon, however, the good name they had gained for themselves was lost, not because there were not still good herring around the coasts, but because the Scotch system of curing was adopted in too much of a hurry, without due consideration of the seasons when curing should take place, without the necessary systematic instruction, and last, but by no means least important, without that which has raised, and kept the standard of cured herring in Scotland at such a high level, namely: a system of official inspection.

RESORTS OF FULL HERRING MUST BE FOUND.

It is absolutely necessary, therefore, that this experiment be continued so that something of the movements and chief resorts of the 'full' herring for which there is the largest and surest demand, may be known.

Mr. Tidmarsh, in his paper already referred to, says in regard to the need for information:—

'The chief cause that retards the development of our fisheries is the total lack of intelligent information concerning them, and until we are in possession of such information we shall not know exactly how to proceed. What we want to know in order to proceed intelligently along the lines of development are: The seasons of the year when fish are on the coast, the localities where they resort in largest quantities, when they are in the most suitable condition for curing, the modern appliances necessary for catching them, and the proper methods of curing and preparing them for the market.'

What Mr. Tidmarsh says, I found to be perfectly true.

SESSIONAL PAPER No. 22

HERRING RESORTS LITTLE KNOWN.

Little or nothing is known as to where the chief herring shoals congregate in the deep water, off shore, or as to when the herring are in the most suitable state for profitable catching and curing; and herein is to be found one of the principal causes of the failure of the drifter to catch as many herring, this year, as I had expected. There was absolutely no reliable information obtainable as a guide in conducting drift net fishing.

EARLY START ESSENTIAL IN 1905.

In carrying on operations next year, I would propose starting a month earlier at Canso, than this year, that is to say, in the end of April or May 1, continuing there till the middle of June, so that something more may be found out, concerning those early 'Matje' herring, which seem to frequent that part of the coast at that season of the year.

TESTS IN OTHER DISTRICTS NECESSARY.

I would further suggest that, during the summer and fall operations be conducted in the Bay Chaleur, and in the Bay of Fundy, where, it is apparent, 'full' herring congregate at that time, and by so doing, I am convinced, from the experience gained this year, of the conditions on this side of the Atlantic, that the whole scheme will be successful in every way, and that sufficient knowledge will be secured, to warrant the adoption of a systematic plan of introducing to and teaching the fishermen of the maritime provinces an improved and paying method of curing their herring.

CLOSE OF EXPERIMENT.

The operations of the drifter ended on September 24, and after stowing away, for the winter, the fishing gear and unused barrels and salt, the staff was paid off.

One of the girls got married at the close of the season, and remained in Canso. The other five girls, along with the cooper and second engineer, left for Scotland on the Allan liner *Bavarian*, from Quebec, on October 7.

The Scotch fishermen decided to remain for the winter, to conduct long line fishing for cod and halibut, as it is carried on in Scotland, under an agreement with Messrs. Whitman and Son, of Canso, until the spring herring fishing comes on again.

VISIT TO BAY DES CHALEURS.

I left Canso on October 11, for Ottawa. On the way, I went along the southern shore of the Bay Chaleur, from Bathurst to Caraquet. I found here that from about August 15 till September 15, a fine class of 'full' herring is to be got on the banks off Caraquet.

This year, as in other places, from whatever cause, they were extremely scarce.

I had an opportunity, however, while there, of seeing and tasting some of these herring, and judging by the size and flavour, I believe they are similar to the 'full' herring of the east coast of England and Scotland.

PACIFIC COAST VISITED.

On reaching Ottawa, I was requested to pay a visit to the Pacific coast and examine the herring caught in British Columbia waters, with a view to finding out if the herring trade there is capable of development along the lines proposed on the Atlantic coast.

4-5 EDWARD VII., A. 1905

On my arrival at Vancouver, I was met by Fishery Inspector C. B. Sword, who supplied me with valuable information and introduced me to those interested in and connected with the herring fishery of British Columbia.

NANAIMO A HERRING CENTRE.

From Vancouver, I went on to Nanaimo, and thence on to Victoria.

Nanaimo seems to be the chief seat of the herring fishery, so far, in British Columbia.

From the middle of November on to the month of March, herring come into the harbour of Nanaimo in such apparently incredible quantities that, during some seasons, they are left stranded on the beach in huge masses, and become a nuisance as they lie rotting there.

The herring of the Pacific coast appear to be, generally speaking, of a smaller class, and contain a far greater amount of oil than the herring of the Atlantic.

While I found that these Pacific herring make very good kippers, they may not prove to be so well adapted as the Atlantic herring for curing purposes, owing to the great amount of oil they contain, even after the roe and milt has formed in them.

When I say that those herring differ from the Atlantic herring for purposes of curing, I do not mean that they cannot be cured, but that they will not keep in good condition for such a length of time as the herring of the Atlantic.

The more oil there is in herring, the more difficult they are to cure in pickle, and the sooner they go wrong and lose quality.

An excess of oil seems to be a prominent feature of all kinds of fish on the Pacific coast, owing, possibly, to the equable temperature of the water and the richness of the food they live on.

Notwithstanding this, however, attempts have been made within the last four years to cure those herring for export, with no little success. The method of curing which has been adopted is a good deal similar to the Scotch method, and, in my opinion, the trade may be developed along the lines on which they have started, with some slight improvements regarding details.

The barrel in use there is an admirable one, and is far ahead of the herring barrel in use on the Atlantic coast.

It is strongly made, hooped with galvanized iron hoops, and is capable of carrying cured herring to any part of the world in good condition.

The use of a similar barrel on the Atlantic coast would go far towards improving the present condition of the herring trade of the east.

The salt in use, however, is, I consider, quite against the proper curing of Pacific herring.

Trial shipments, I was told, had been made to Australia and New York, and in spite of the poor quality of the salt, and some defects in the curing process, have met with a very favourable reception, especially in Australia.

I found there is a demand springing up for Pacific herring in China, not cured in pickle, but dry salted in boxes, and I believe extensive shipments of herring put up in that way will be made this season to that country.

While there may not be a great demand for those Pacific herring in eastern Canadian or American markets, as there they will come into competition with a better class of fish, I believe there is a large outlet for them in the western states of America, in Australia, the west coast of South America, China and the Straits Settlements, if properly attended to.

EXPERIMENT REPEATED IN B. C. RECOMMENDED.

To improve the already fairly effective methods of curing in vogue in British Columbia, and as the people there are keenly anxious for such improvement, I would

SESSIONAL PAPER No. 22

suggest that, as the herring season on the Pacific only begins after the season on the Atlantic has closed, next year, three gutting girls and a cooper be sent to the Pacific coast, after operations have ceased on the Atlantic coast, to give a month's instruction in herring curing.

CONCLUSION.

In conclusion, I venture to say, sir, what everyone who has any knowledge of herring and herring fisheries has said, that the curing experiment inaugurated at the instance of the hon. the Minister of Marine and Fisheries, is a great work, a work, to my mind, of national importance to a country having such immense natural resources in its seas. These resources will, if nursed, with practical and intelligent care, prove an incalculable boon to the inhabitants of the shores of Canada particularly and to the Dominion generally.

APPENDIX No. 1.

EXPENDITURE AND REVENUE.

The total expenditure for all Fisheries services, except Civil Government, for the fiscal year ending June 30, 1904, including Fishing Bounty, amounted to \$634,824, being within the appropriation by \$12,383.

The total net fisheries revenue, during the same period, from rents, license fees, fines and sales, including the *modus vivendi* licenses to United States vessels, amounted to \$95,756.

Service.	Expenditure.	Vote.
	\$ cts.	\$ cts.
Fisheries	105,111 40	105,300 00
Fish-breeding.....	109,286 07	110,000 00
Fisheries protection service.....	204,654 66	205,240 00
Fishing bounty.....	158,943 70	160,000 00
Miscellaneous expenditure.....	56,828 18	68,667 98
Total.....	634,824 01	647,207 98

The details of the above will be found in the Auditor General's report under the proper headings.

In addition to the above, the following summary shows the salaries and disbursements of fishery officers in the several provinces, together with the expenses for maintenance of the different fish-breeding establishments throughout the Dominion.

Service.	Expenditure.
	\$ cts.
Fisheries, Ontario ...	4,500 43
" Quebec.....	7,619 67
" New Brunswick	27,664 34
" Nova Scotia.....	30,003 01
" Prince Edward Island	7,320 96
" Manitoba	2,789 74
" North-west Territories.....	7,317 49
" British Columbia	15,133 65
" Yukon.....	1,400 00
General account...	1,362 11
Total	105,111 40

4-5 EDWARD VII., A. 1905

FISHERIES GENERAL EXPENDITURE.

This expenditure by provinces is subdivided as follows :—

	Amount.	Total.
<i>Ontario.</i>	\$ cts.	\$ cts.
Salaries of officers.....	3,600 00	
Disbursements of officers.....	900 43	
Total.....		4,500 43
<i>Quebec.</i>		
Salaries of officers.....	3,891 16	
Disbursements of officers.....	3,527 40	
Miscellaneous.....	201 10	
Total.....		7,619 67
<i>New Brunswick.</i>		
Salaries of officers.....	19,407 77	
Disbursements of officers.....	8,117 68	
Miscellaneous.....	38 89	
Total.....		27,664 34
<i>Nova Scotia.</i>		
Salaries of officers.....	14,703 66	
Disbursements of officers.....	15,299 35	
Total.....		30,003 11
<i>Prince Edward Island.</i>		
Salaries of officers.....	5,361 27	
Disbursements of officers.....	1,903 74	
Miscellaneous.....	55 95	
Total.....		7,320 96
<i>Manitoba.</i>		
Salaries of officers.....	1,622 45	
Disbursements of officers.....	1,114 54	
Miscellaneous.....	52 75	
Total.....		2,789 74
<i>North-west Territories.</i>		
Salaries of officers.....	4,339 25	
Disbursements of officers.....	3,082 49	
Miscellaneous.....	95 75	
Total.....		7,317 49
<i>British Columbia.</i>		
Salaries of officers.....	10,755 25	
Disbursements of officers.....	3,781 05	
Miscellaneous.....	597 35	
Total.....		15,133 65
<i>Yukon.</i>		
Salaries of officers.....		1,400 00
General account.....		1,362 11
Grand total.....		105,111 40

SESSIONAL PAPER No. 22

FISHERIES GENERAL EXPENDITURE—Continued.

FISH-BREEDING.

Service.	Expenditure.	Total.
	\$ cts.	\$ cts.
Fish-breeding, Ottawa hatchery, Ont.....	2,291 28	
" Newcastle " "	4,546 28	
" Sandwich " "	7,808 61	
" Quinté Bass Pond hatchery, Ont.	654 29	
" Tadoussac hatchery, Que.....	3,973 34	
" Gaspé " "	1,770 39	
" Magog " "	1,117 72	
" St. Alexis " "	1,003 84	
" Restigouche " N.B.....	4,915 22	
" Miramichi " "	2,822 06	
" St. John River hatchery, N.B.....	6,414 96	
" Shemogue " "	2,493 36	
" Shippegan " "	360 42	
" Bedford hatchery, N.S.....	2,056 08	
" Margaree " "	1,863 40	
" Bay view " "	2,428 74	
" Selkirk " Man.....	3,978 04	
" Fraser River hatchery, B.C.....	8,515 27	
" Granite Creek " "	8,029 50	
" Skeena " "	8,496 04	
" Lac Tremblant.....	3,588 95	
" Charlottetown.....	10,733 51	
" Caraquet	5,171 03	
General account.....	14,253 74	
Total ..		109,286 07

SALARIES, ETC.

<i>Newcastle Hatchery.</i>		
Salaries.	1,306 66	
Miscellaneous expenditure.....	1,239 52	
Total.....		4,546 28
<i>Sandwich Hatchery.</i>		
Salaries.....	937 50	
Miscellaneous expenditure.....	6,871 11	
Total		7,808 61
<i>Ottawa Hatchery.</i>		
Salaries	1,361 75	
Miscellaneous expenditure.....	929 53	
Total.....		2,291 28
<i>Quinté Bass Pond.</i>		
Salaries.....	125 00	
Miscellaneous expenditure	529 29	
Total.		654 29
<i>Tadoussac Hatchery.</i>		
Salaries.....	800 00	
Miscellaneous expenditure.....	3,173 34	
Total		3,973 34
Carried forward.....		19,273 80

4-5 EDWARD VII., A. 1905

FISHERIES GENERAL EXPENDITURE—*Continued*FISH-BREEDING—*Continued.*

	\$ cts.	\$ cts.
Brought forward.....		19,273 80
<i>Gaspé Hatchery.</i>		
Salaries.....	600 00	
Miscellaneous expenditure.....	1,170 39	
Total.....		1,770 39
<i>Magog Hatchery.</i>		
Salaries.....	541 62	
Miscellaneous expenditure.....	576 10	
Total.....		1,117 72
<i>St. Alexis.</i>		
Salaries.....	390 00	
Miscellaneous expenditure.....	613 84	
Total.....		1,003 84
<i>Restigouche Hatchery.</i>		
Salaries.....	1,000 00	
Miscellaneous expenditure.....	3,915 22	
Total.....		4,915 22
<i>Miramichi Hatchery.</i>		
Salaries.....	1,000 00	
Miscellaneous.....	1,822 06	
Total.....		2,822 06
<i>St. John River Hatchery.</i>		
Salaries.....	600 00	
Miscellaneous.....	5,814 96	
Total.....		6,414 96
<i>Shippegan.</i>		
Miscellaneous expenditure.....		360 42
<i>Shemogue.</i>		
Miscellaneous expenditure...		2,493 36
<i>Bedford Hatchery.</i>		
Salaries.....	1,299 67	
Miscellaneous expenditure.....	756 41	
Total.....		2,056 08
<i>Bay View Hatchery.</i>		
Salaries.....	219 00	
Miscellaneous expenditure.....	2,209 74	
Total.....		2,428 74
<i>Margaree.</i>		
Salaries.....	500 00	
Miscellaneous expenditure.....	1,363 40	
Total.....		1,863 40
<i>Selkirk Hatchery.</i>		
Miscellaneous expenditure.....		3,978 04
<i>Fraser River Hatchery.</i>		
Salaries.....	500 00	
Miscellaneous expenditure.....	8,015 27	
Total.....		8,515 27
Carried forward.....		59,013 30

SESSIONAL PAPER No. 22

FISHERIES GENERAL EXPENDITURE—Continued.

FISH BREEDING—Concluded.

	\$	cts.	\$	cts.
Brought forward			59,013	30
<i>Skeena.</i>				
Salaries.....	1,000	00		
Miscellaneous expenditure.....	7,496	04		
Total.....			8,496	04
<i>Granite Creek.</i>				
Salaries.....	900	00		
Miscellaneous expenditure.....	7,129	50		
Total			8,029	50
<i>Lac Tremblant.</i>				
Miscellaneous.....			3,588	95
<i>Charlottetown.</i>				
Miscellaneous.....			10,733	51
<i>Carxquet.</i>				
Miscellaneous.....			5,171	03
<i>General account.</i>				
Miscellaneous			14,253	74
Total.....			109,286	07

FISHERIES PROTECTION SERVICE—1903-1904.

	\$	cts.	\$	cts.
<i>Steamer 'Acadia'</i>				
Wages of officers and men	591	00		
Miscellaneous.....	713	93		
Total.....			1,304	93
<i>Steamer 'La Canadienne.'</i>				
Wages of officers and men...	8,383	22		
Provisions.....	2,631	94		
Fuel	2,964	00		
Repairs.....	7,029	43		
Miscellaneous expenditure.....	1,502	21		
Clothing.....	500	25		
Total.....			23,011	05

FISHERIES GENERAL EXPENDITURE—Continued.

FISHERIES PROTECTION SERVICE—1903-1904—Concluded.

	\$ cts.	\$ cts.
Brought forward.....		23,011 05
Steamer 'Curlew.'		
Wages of officers and men.....	5,666 50	
Provisions.....	1,672 14	
Fuel.....	1,495 30	
Repairs.....	1,815 27	
Miscellaneous expenditure.....	211 17	
Clothing.....	366 25	
Total.....		11,216 63
Steamer 'Petrel.'		
Wages of officers and men.....	6,654 50	
Provisions.....	2,263 62	
Fuel.....	1,379 52	
Repairs.....	997 97	
Miscellaneous expenditure.....	330 99	
Clothing.....	26 50	
Total.....		11,653 10
Steamer 'Constance.'		
Wages of officers and men.....	6,902.96	
Provisions.....	2,407.50	
Fuel.....	3,037.50	
Repairs.....	7,093.05	
Miscellaneous expenditure.....	1,152.78	
Clothing.....	54.95	
Total.....		20,648.81
Schooner 'Osprey.'		
Wages of officers and men.....	4,722.08	
Provisions.....	2,260.13	
Fuel.....	132.19	
Repairs.....	2,404.14	
Miscellaneous expenditure.....	1,238.50	
Clothing.....	527.50	
Total.....		11,284.54
Schooner 'Kingfisher.'		
Wages of officers and men.....	3,983.32	
Provisions.....	3,015.50	
Fuel.....	199.11	
Repairs.....	1,670.77	
Miscellaneous expenditure.....	1,498.98	
Clothing.....	335.75	
Total.....		10,703.43
'Georgia.'		
Wages of officers and men.....	2,080.00	
Supplies, &c.....	1,659.28	
Total.....		3,739.28
'Swan.'		
Wages of officers, &c.....	1,380.00	
Supplies.....	2,501.81	
Total.....		3,881.81
'Kestrel.'		
Wages, &c.....	12,787.12	
Miscellaneous expenditure.....	13,159.10	
Total.....		25,946.22
Carried forward.....		47,185 71

SESSIONAL PAPER No. 22

FISHERIES GENERAL EXPENDITURE—*Concluded.*

MISCELLANEOUS EXPENDITURE.

	\$	cts.	\$	cts.
Brought forward			47,185	71
<i>' Falcon.'</i>				
Wages, &c.	418.41			
Miscellaneous	756.75			
Total.....			1,175.16	
<i>' Brant.'</i>				
Wages of officers and men.....	391.00			
Provisions.....	415.18			
Fuel.....	216.68			
Supplies.....	116.00			
Miscellaneous.....	14.23			
Total....			1,153.09	
General account.....			22,730.38	
Fisheries Intelligence Bureau.....			2,432.33	
New Steamers to replace <i>Acadia</i> and <i>Petrel</i>			74,422.71	
			225,303.47	
Less amount paid by Customs Department for steamer <i>Constance</i>			20,648.81	
Net total.....			204,654.66	

	\$	cts.
MISCELLANEOUS.		
Building fishways.....	3,381	88
Legal and incidental expenses.....	1,977	86
Canadian fisheries exhibit.....	3,445	62
Expenditure in connection with the distribution of fishing bounties.....	5,024	11
Surveys of oyster beds.....	3,549	74
Issuing licenses to United States fishing vessels.....	511	65
Cold storage.	24,952	75
Russian seizures.....	4,670	00
Georgian Bay biological laboratory.....	1,500	00
Investigating herring fishing, &c	6,779	11
Fisheries revenue (refunds).....	406	00
Behring Sea.....	629	46
	56,828	18

STATEMENT of Fisheries Revenue paid to the credit of the Receiver General of Canada,
for the Fiscal Year ended June 30, 1904.

	\$	cts.
Ontario—rents, license fees, fines, &c.....	2,578	48
Quebec	5,070	64
Nova Scotia	3,716	75
New Brunswick	10,643	20
P. E. Island	1,983	42
Manitoba	4,002	70
N. W. Territories	922	50
British Columbia	56,904	31
Yukon Territory	240	00
Hudson Bay	10	00
Total,	86,072	03
LESS—Refunds..	481	00
Total.....	85,591	03
Licenses to United States fishing vessels.....	10,165	50
Net total.....	95,756	53

COMPARATIVE STATEMENT of Expenditure and Revenue of the

Number.		1890-91.		1891-92.		1892-93.	
		Expendi- ture.	Revenue.	Expendi- ture.	Revenue.	Expendi- ture.	Revenue.
		\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.
1	General Account Fisheries...						
2	Ontario...	15,540 30	26,517 70	15,155 83	25,368 90	20,116 91	30,623 09
3	Quebec...	10,666 98	3,642 14	10,917 36	4,742 76	11,761 34	7,471 70
4	New Brunswick...	16,082 77	7,193 69	15,707 98	6,334 83	15,721 05	7,831 53
5	Nova Scotia...	17,844 19	5,582 65	18,755 86	3,357 42	19,444 22	6,782 02
6	Prince Edward Island...	3,242 25	667 00	1,835 65	166 00	2,847 60	304 10
7	Manitoba & N.W. Territories	3,609 03	1,234 00	3,593 43	1,079 00	3,932 96	1,661 68
8	British Columbia	4,220 53	12,859 02	6,158 17	8,192 48	5,490 60	40,264 00
9	Fish-breeding and fishways...	39,496 45	1,286 50	43,957 74	178 00	47,322 49	
10	Fisheries Protection Service..	83,050 16	1,934 49	93,397 40		106,805 39	
11	Miscellaneous	13,382 28		17,449 06		100,602 14	
	Totals...	207,234 94	60,917 19	226,928 48	49,719 39	334,044 70	94,938 12
	Fishing bounties...	165,967 22		156,892 25		159,752 15	

		1897-98.		1898-99.		1899-00.	
		Expendi- ture.	Revenue.	Expendi- ture.	Revenue.	Expendi- ture.	Revenue.
		\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.
12	General Account Fisheries...	2,389 66		2,632 12		652 41	
13	Ontario...	19,239 34	30,574 57	11,784 22	5,830 85	3,804 94	794 12
14	Quebec...	11,140 16	7,571 15	11,350 27	6,287 71	5,452 41	2,543 04
15	New Brunswick...	17,063 58	5,317 08	22,922 50	10,430 08	21,659 94	12,015 27
16	Nova Scotia...	21,683 91	11,511 85	25,348 11	6,668 22	27,461 91	5,494 49
17	Prince Edward Island...	6,775 78	2,707 57	6,832 85	2,242 24	7,364 30	2,207 12
18	Manitoba...	1,206 26	1,515 00	1,883 37	1,537 85	1,723 59	2,028 00
19	N. W. Territories...	2,324 66	393 87	4,065 68	150 50	3,848 25	1,522 50
20	British Columbia	8,508 79	47,864 75	8,459 47	45,801 75	13,662 17	53,195 35
21	Yukon						
22	Hudson Bay Territory						
23	Fish-breeding	28,002 32		34,522 57		38,070 12	
24	Fisheries Protection Service..	101,807 96		105,133 27		97,370 11	
25	Miscellaneous	59,919 56		23,207 73		31,125 67	
	Totals...	280,061 98	107,455 84	427,599 16	76,949 20	411,717 35	79,799 89
	Fishing bounties...	157,504 00		159,459 00		160,000 00	

SESSIONAL PAPER No. 22

Fisheries Department from July 1, 1890, to June 30, 1904.

1893-94.		1894-95.		1895-96.		1896-97.		Number.
Expendi- ture.	Revenue.	Expendi- ture.	Revenue.	Expendi- ture.	Revenue.	Expendi- ture.	Revenue.	
\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	
22,634 37	28,632 82	21,938 56	33,211 60	24,917 48	35,681 68	21,592 40	32,814 66	1
11,692 82	7,211 82	12,459 34	8,836 18	11,870 43	8,160 98	12,910 80	7,876 12	2
18,522 94	8,333 24	21,370 94	11,170 36	20,526 56	10,696 88	21,671 92	10,110 77	3
20,420 81	5,296 27	23,555 38	7,075 07	23,049 41	6,180 93	23,682 33	5,239 55	4
3,078 55	980 15	3,796 58	3,312 30	3,555 87	2,161 85	3,744 36	2,032 25	5
5,331 29	926 99	6,178 71	2,458 80	6,915 20	2,256 69	1,908 14	1,719 00	6
5,283 21	25,337 90	6,218 74	23,517 25	6,226 77	26,410 75	2,181 58	344 13	7
45,024 67	.....	39,730 93	.....	38,050 41	.....	8,841 64	39,888 82	8
115,147 59	.....	100,207 29	.....	102,021 72	.....	27,330 73	.....	9
34,892 19	.....	24,619 86	.....	20,203 25	.....	99,357 01	.....	10
282,028 44	76,719 19	260,076 33	89,581 56	257,237 10	91,549 76	62,777 30	.....	11
158,794 54	.....	160,089 42	.....	163,567 99	.....	289,197 01	100,025 30	
						154,389 77	.....
1900-01.		1901-02.		1902-03.		1903-04.		
1,117 49	.....	765 78	.....	402 97	.....	1,362 11	.....	12
3,819 57	717 35	4,445 93	373 42	4,650 53	1,818 83	4,500 43	2,578 48	13
7,934 03	4,738 92	6,242 58	2,498 85	6,785 86	4,379 15	7,619 67	4,670 64	14
28,452 51	10,150 40	23,813 62	11,658 34	27,132 84	11,188 02	27,664 34	10,593 20	15
35,760 39	6,595 94	32,618 00	6,084 65	39,118 79	3,962 45	30,003 01	3,685 75	16
7,934 03	1,525 30	7,814 02	1,843 45	7,081 60	2,007 35	7,320 96	1,983 42	17
2,669 74	1,103 00	2,624 87	2,279 00	3,129 70	1,784 00	2,789 74	4,002 70	18
6,251 39	1,222 55	5,928 22	950 07	7,076 26	1,350 50	7,317 49	922 50	19
17,886 36	52,960 35	18,560 73	41,178 65	17,808 45	43,015 62	15,133 65	56,904 34	20
.....	.....	2,066 66	1,130 00	1,522 00	320 00	1,400 00	240 00	21
.....	.....	.....	.....	.....	.....	.....	10 00	22
68,961 40	.....	79,891 85	.....	77,330 86	.....	109,286 07	.....	23
124,211 21	.....	152,723 69	.....	145,137 49	.....	204,654 66	.....	24
27,833 79	.....	56,131 26	.....	30,903 27	.....	56,828 18	.....	25
332,767 07	79,013 81	393,627 21	67,996 43	368,091 12	69,825 92	475,880 31	85,591 03	
158,802 50	.....	155,942 00	.....	159,853 50	.....	158,943 70	.....

APPENDIX No. 2

FISHING BOUNTIES.

The payments made for this service are under the authority of Act 54-55 Vic., cap. 42, intituled: 'An Act to encourage the development of the sea fisheries and the building of fishing vessels,' which provides for the payment of the sum of \$160,000 annually, under regulations to be made from time to time by the Governor General in Council.

REGULATIONS.

The regulations governing the payment of fishing bounties are as established by the following Order in Council, dated December 10, 1897 :—

Order in Council.

AT THE GOVERNMENT HOUSE AT OTTAWA.

FRIDAY, the 10th day of December, 1897.

Present :

HIS EXCELLENCY THE GOVERNOR GENERAL IN COUNCIL.

His Excellency, in virtue of the provisions of 'The Bounty Act, 1891', 54-55 Victoria, chapter 42, and by and with the advice of the Queen's Privy Council for Canada, is pleased to order that the regulations governing the payment of fishing bounties established by order of the Governor in Council, dated the 24th August, 1894, shall be and the same are hereby rescinded, and the following regulations substituted therefor :—

1. Resident Canadian fishermen who have been engaged in deep-sea fishing for fish other than shell-fish, salmon and shad, or fish taken in rivers, or mouths of rivers, for at least three months, and have caught not less than 2,500 pounds of sea-fish, shall be entitled to a bounty; provided always, that no bounty shall be paid to men fishing in boats measuring less than 13 feet keel, and not more than 3 men (the owner included), will be allowed as claimants in boats under 20 feet.

2. No bounty shall be paid upon fish caught in trap-nets, pound-nets and weirs, nor upon the fish caught in gill-nets fished by persons who are pursuing other occupations than fishing, and who devote merely an hour or two daily to fishing these nets but are not, as fishermen, steadily engaged in fishing.

3. Only one claim will be allowed in each season, even though the claimant may have fished in two vessels, or in a vessel and a boat, or in two boats.

4. The owners of boats measuring not less than 13 feet keel which have been engaged during a period of not less than three months in deep-sea fishing for fish other than shell-fish, salmon or shad, or fish taken in rivers or mouths of rivers, shall be entitled to a bounty on each such boat.

5. Canadian registered vessels, owned and fitted out in Canada, of 10 tons and upwards (up to 80 tons) which have been exclusively engaged during a period of not less than three months in the catch of sea-fish other than shell-fish, salmon or shad, or fish taken in rivers, or mouths of rivers, shall be entitled to a bounty to be calculated on the registered tonnage which shall be paid to the owner or owners.

SESSIONAL PAPER No. 22

6. The three months during which a vessel must have been engaged in fishing, to be entitled to bounty, shall commence on the day the vessel sails from port on her fishing voyage and end the day she returns to port from said voyage.

7. Owners or masters of vessels intending to fish and claim bounty on their vessels must, before proceeding on a fishing voyage, procure a license from the nearest Collector of Customs or Fishery Overseer, said license to be attached to the claim when sent in for payment.

8. Dates and localities of fishing must be stated in the claim, as well as the quantity and kinds of sea-fish caught.

9. Ages of men must be given. Boys under 14 years of age are not eligible as claimants.

10. Claims must be sworn to as true and correct in all their particulars.

11. Claims must be filed on or before November 30 in each year.

12. Officers authorized to receive claims will supply the requisite blanks free of charge, and after certifying the same will transmit them to the Department of Marine and Fisheries.

13. No claim in which an error has been made by the claimant or claimants shall be amended after it has been signed and sworn to as correct.

14. Any person or persons detected making returns that are false or fraudulent in any particular will be debarred from any further participation in the bounty, and be prosecuted according to the utmost rigour of the law.

15. The amount of the bounty to be paid to fishermen and owners of boats and vessels will be fixed from time to time by the Governor in Council.

16. All vessels fishing under bounty license are required to carry a distinguishing flag, which must be shown at all times during the fishing voyage at the main-topmast head. The flag must be four feet square in equal parts of red and white, joined diagonally from corner to corner. Any case of neglect to carry out this regulation reported to the Department of Marine and Fisheries will entail the loss of the bounty, unless satisfactory reasons are given for its non-compliance.

JOHN J. McGEE,

Clerk of the Privy Council.

The bounty for the year 1903 was distributed on the basis authorized by the following Order in Council —

AT THE GOVERNMENT HOUSE AT OTTAWA,

The 6th day of February, 1904.

Present :

HIS EXCELLENCY THE GOVERNOR GENERAL IN COUNCIL.

The Governor General in Council is pleased to order, and it is hereby ordered, that the sum of one hundred and sixty thousand dollars, payable under the provisions of the Act 54-55 Victoria, chapter 42, intituled: 'An Act to amend chapter 96 of the Revised Statutes, intituled an Act to encourage the development of the Sea Fisheries and the building of fishing vessels,' shall be distributed for the year 1903-1904 upon the following basis: —

Vessels: The owners of the vessels entitled to receive bounty shall be paid one dollar (\$1) per registered ton, provided, however, that the payment to the owner of any one vessel shall not exceed the sum of eighty dollars (\$80), and all vessel fishermen entitled to receive bounty, shall be paid the sum of seven dollars and thirty cents (\$7.30) each.

Boats: Fishermen engaged in fishing in boats, who shall also have complied with the regulations entitling them to receive the bounty, shall be paid the sum of three dollars and ninety cents (\$3.90) each, and the owners of fishing boats shall be paid one dollar (\$1) per boat.

JOHN J. McGEE,

Clerk of the Privy Council.

There were received for the year 1903, 12,217 claims, a decrease of 579 as compared with 1902.

The number of claims paid during the year was 12,178, a decrease of 545 as compared with the previous year.

There were \$72,936.10 in bounties paid to vessels and their crews, and \$86,007.60 to boats and boat fishermen, making the total payments during the year 1903, \$158,943.70.

The number of vessels which received bounty during the year was 851, the total tonnage being 26,501 tons, an increase of 56 vessels and 980 tons.

During the year bounty was paid on 11,327 boats, and to 19,149 boat fishermen, being a decrease of 601 boats and 1,077 men as compared with 1902.

DETAILED STATEMENT of Fishing Bounty Claims received and paid during the year 1903.

Province.	County.	NUMBER OF CLAIMS.		
		Received.	Rejected and held in Abeyance.	Paid.
Nova Scotia	Annapolis.	162	.....	162
	Antigonish.	118	.....	118
	Cape Breton.	322	1	322
	Cumberland.	4	1	3
	Digby.	489	2	487
	Guysborough.	880	1	879
	Halifax.	1,251	4	1,247
	Hants. . . . .	.....	.....	.....
	Inverness.	299	2	297
	King's.	54	.....	54
	Lunenburg.	763	.....	763
	Pictou.	11	.....	11
	Queen's.	88	1	87
	Richmond.	675	.....	675
	Shelburne.	558	1	557
	Victoria.	370	.....	370
	Yarmouth.	252	.....	252
Totals.		6,297	13	6,284
New Brunswick.	Charlotte.	393	1	392
	Gloucester.	359	1	358
	Kent.	50	.....	50
	Northumberland.	3	.....	3
	Restigouche.	2	.....	2
	St. John.	25	.....	25
Totals.		832	2	830
Prince Edward Island.	King's.	535	2	533
	Prince.	344	2	342
	Queen's.	99	.....	99
Totals.		978	4	974
Quebec.	Bonaventure.	789	5	784
	Gaspé.	2,462	10	2,452
	Rimouski.	40	.....	40
	Saguenay.	819	5	814
Totals.		4,110	20	4,090
Grand totals.		12,217	39	12,178

SESSIONAL PAPER No. 22

DETAILED STATEMENT of Fishing Bounties paid to Vessels in each County during the Year 1903.

Province.	County.	Number of Vessels.	Tonnage.	Average Tonnage.	Number of Men.	Amount paid.
Nova Scotia.....	Annapolis.....	12	213	17.75	41	512 30
	Antigonish.....	1	10	10	3	31 90
	Cape Breton.....	12	196	16.33	48	546 40
	Cumberland.....					
	Digby.....	56	1,697	30.30	442	4,923 55
	Guysborough.....	47	863	18.36	226	2,512 80
	Halifax.....	48	1,100	22.91	294	3,246 20
	Hants.....					
	Inverness.....	27	380	14.07	138	1,387 40
	King's.....	4	55	13.75	7	106 10
	Lunenburg.....	171	12,700	74.26	2,713	32,504 90
	Pictou.....					
	Queen's.....	8	191	23.87	44	512 20
	Richmond.....	58	1,272	21.93	310	3,535 00
	Shelburne.....	54	1,689	31.27	461	5,054 30
	Victoria.....	10	130	13.00	54	524 20
	Yarmouth.....	38	1,496	39.39	392	4,357 60
	Total.....	546	21,992	40.27	5,173	59,754 85
New Brunswick.....	Charlotte.....	55	917	16.67	202	2,391 45
	Gloucester.....	196	2,389	12.18	740	7,791 00
	Kent.....					
	Northumberland.....	3	33	11.00	10	106 00
	Restigouche.....	2	37	18.50	8	95 40
	St. John.....	3	78	26.00	11	158 30
	Total.....	259	3,454	20.98	971	10,542 15
Prince Edward Island.	King's.....	22	504	13.33	106	1,277 80
	Prince.....	8	173	21.62	37	443 10
	Queen's.....	6	88	14.66	26	277 80
	Total.....	36	765	21.25	169	1,998 70
Quebec.....	Bonaventure.....					
	Gaspé.....	4	49	12.25	19	187 70
	Rimouski.....					
	Saguenay.....	6	241	40.16	29	452.70
	Totals.....	10	290	29.00	48	640 40
	Grand totals.....	851	26,501	31.14	6,361	72,936 10

4-5 EDWARD VII., A. 1905

DETAILED STATEMENT of Fishing Bounties paid to Boats in each County during the Year 1903, showing also total amount paid to Vessels and Boats for the Year.

Province.	County.	Number of Boats.	Number of Men.	Amount paid.	Total Bounty paid to Vessels and Boats in 1903.
				\$ cts	\$ cts
Nova Scotia.....	Annapolis.....	150	229	1,043 10	1,555 40
	Antigonish.....	117	168	772 20	804 10
	Cape Breton.....	310	602	2,657 60	3,204 00
	Cumberland.....	3	4	18 60	18 60
	Digby.....	431	764	3,410 60	8,334 15
	Guysborough.....	832	1,306	5,925 40	8,438 20
	Halifax ..	1,199	1,565	7,301 50	10,547 70
	Hants.....				
	Inverness.....	270	539	2,372 10	3,759 50
	King's ..	50	74	338 60	444 70
	Lunenburg.....	592	708	3,343 20	35,858 10
	Pictou.....	11	19	85 10	85 10
	Queen's.....	79	136	609 40	1,121 60
	Richmond.....	617	950	4,322 00	7,857 00
	Shelburne.....	503	844	3,794 60	8,848 90
	Victoria.....	360	555	2,524 50	3,048 70
	Yarmouth.....	214	312	1,430 80	5,788 40
	Totals.....	5,738	8,775	39,959 30	99,714 15
New Brunswick.....	Charlotte.....	337	468	2,162 20	4,553 65
	Gloucester.....	162	381	1,647 90	9,438 90
	Kent.....	50	79	358 10	358 10
	Northumberland ..				106 00
	Restigouche ..				95 40
	St. John ..	22	36	162 40	320 70
	Totals.....	571	964	4,330 60	14,872 75
Prince Edward Island.	King's.....	511	732	3,365 80	4,643 60
	Prince.....	334	781	3,379 90	3,823 00
	Queen's.....	93	209	908 10	1,185 90
	Totals.....	938	1,722	7,653 80	9,652 50
Quebec.....	Bonaventure.....	784	1,386	6,189 20	6,189 20
	Gaspé.....	2,448	4,880	21,480 00	21,667 70
	Rimouski..	40	51	238 90	238 90
	Saguenay ..	808	1,371	6,155 80	6,608 50
	Totals.....	4,080	7,688	34,063 90	34,704 30
	Grand totals..	11,327	19,149	86,007 60	158,943 70

SESSIONAL PAPER No. 22

GENERAL STATISTICS.

The fishing bounty was first paid in 1882.

The payments were made each year on the following basis:—

1882, vessels \$2 per ton, one half to the owner and the other half to the crew.
Boats at the rate of \$5 per man, one-fifth to the owner and four-fifths to the men.

1883, vessels \$2 per ton, and boats \$2.50 per man, distributed as in 1882.

1884, vessels \$2 per ton, as in 1882 and 1881.

Boats from 14 to 18 feet keel.....	\$1 00
“ 18 to 25 “	1 50
“ 25 feet keel upwards.....	2 00
Boat fishermen.. ..	3 00

1885, 1886 and 1887, vessels \$2 per ton as in previous years. Boats measuring 13 feet keel having been admitted in 1885, the rates were :—Boats from 13 to 18 feet keel, \$1 ; from 18 to 25 feet keel, \$1.50 ; from 25 feet keel upwards, \$2, and fishermen \$3 each.

1888, vessels \$1.50 per ton, one-half each to owner and crew. Boats, the same as 1885, 1886 and 1887.

1889, 1890 and 1891, vessels \$1.50 per ton as in 1888. Boats \$1 each. Boat fishermen \$3.

1892, vessels \$3 per ton, one half each to owner and crew. Boats \$1 each. Boat fishermen \$3.

1893, vessels \$2.90 per ton, paid as formerly. Boats \$1 each. Boat fishermen \$3.

1894, vessels \$2.70 per ton, distributed as in previous years. Boats \$1 each. Boat fishermen \$3.

1895, vessels \$2.60 per ton, half each to owner and crew. Boat \$1 each. Boat fishermen \$3.

1896, vessels \$1 per ton, which was paid to the owners, and vessel fishermen \$5 each, clause \$5 of the regulation having been amended accordingly. Boats \$1 each, and boat fishermen \$3.50 per man.

1897, vessels \$1 per ton, and vessel fishermen \$6 each. Boats \$1 each, and boat fishermen \$3.50 per man.

1898, vessels \$1 per ton, and vessel fishermen \$6.50 each. Boats \$1 each, and boat fishermen \$3.50 per man.

1899, vessels \$1 per ton, and vessel fishermen \$7 each. Boats \$1 each, and boat fishermen \$3.50 per man.

1900, vessels, \$1 per ton, and vessel fishermen \$6.50 each. Boats \$1 each, and boat fishermen \$3.50 per man.

1901, vessels \$1 per ton, and vessel fishermen \$7 each. Boats \$1 each, and boat fishermen \$3.50 per man.

1902, vessels \$1 per ton, and vessel fishermen, \$7.25 each. Boats \$1 each, and boat fishermen, \$3.80 per man.

1903, vessels \$1 per ton, and vessel fishermen \$7.30 each. Boats \$1 each, and boat fishermen \$3.90 per man.

Since 1882, 17,877 vessels, totalling a tonnage of 633,654 tons, have received the bounty. The total number of vessel fishermen which received bounty is 137,195 being an average of about 7 men per vessel.

The total number of boats to which bounty was paid since 1882 is 300,220, and the number of fishermen 551,576. Average number of men per boat 2.

The highest bounty paid per head to vessel fishermen was \$21.75 in 1893 ; the lowest 83 cents, while the highest to boat fishermen was \$4, the lowest \$2.

The general average paid per head is \$5.04.

COMPARATIVE STATEMENT by Provinces for the Years 1882 to 1903, inclusive, showing :—
(1) Total number of Fishing Bounty Claims received and paid by the Department of Marine and Fisheries.

YEAR.	NOVA SCOTIA.		NEW BRUNSWICK.		P.E. ISLAND.		QUEBEC.		TOTAL.	
	Received.	Paid.	Received.	Paid.	Received.	Paid.	Received.	Paid.	Received.	Paid.
1882.....	6,730	6,613	1,257	1,142	1,169	1,100	3,162	3,117	12,318	11,972
1883.....	7,171	7,076	1,693	1,579	1,138	1,106	3,602	3,325	13,604	13,086
1884.....	7,007	6,930	1,252	1,224	923	885	3,470	3,429	12,652	12,468
1885.....	7,646	7,599	1,609	1,588	1,117	1,025	3,943	3,912	14,315	14,124
1886.....	7,639	7,702	1,767	1,763	1,131	1,080	4,275	4,355	14,812	14,900
1887.....	8,262	8,227	1,975	1,958	1,201	1,126	4,138	4,105	15,576	15,416
1888.....	8,481	8,429	2,065	2,026	1,153	834	4,328	4,310	16,027	15,599
1889.....	8,816	8,523	2,428	2,392	1,211	1,511	4,664	4,652	17,119	17,078
1890.....	9,337	9,429	2,522	2,469	1,352	1,257	4,860	4,804	18,071	17,959
1891.....	10,242	10,063	2,831	2,084	1,482	1,446	5,108	4,913	19,663	18,506
1892.....	8,272	8,186	1,067	1,001	1,065	1,051	4,425	4,204	14,829	14,442
1893.....	7,926	7,844	967	881	1,027	1,012	4,059	3,898	13,979	13,635
1894.....	8,640	8,600	925	911	983	963	3,948	3,876	14,496	14,350
1895.....	8,835	8,825	979	975	1,009	1,025	3,904	3,955	14,727	14,780
1896.....	8,597	8,562	1,137	1,064	1,111	1,120	4,366	4,229	15,211	14,975
1897.....	8,450	8,418	1,042	991	1,175	1,171	4,180	4,149	14,847	14,729
1898.....	8,446	8,347	934	917	1,143	1,145	4,156	4,092	14,679	14,501
1899.....	7,894	7,754	849	825	1,016	947	4,134	4,102	13,893	13,628
1900.....	7,484	7,452	904	904	1,119	1,169	4,264	4,251	13,771	13,776
1901.....	7,346	7,344	829	826	941	937	4,277	4,267	13,393	13,374
1902.....	6,710	6,671	802	794	913	912	4,371	4,346	12,796	12,723
1903.....	6,297	6,284	832	830	978	974	4,110	4,090	12,217	12,178
Total.....	176,228	174,878	30,666	29,144	24,357	23,796	91,744	90,381	322,995	318,199

(2) NUMBER of vessels, tonnage and number of men which received Bounty in each year.

YEAR.	NOVA SCOTIA.			NEW BRUNSWICK.			P.E. ISLAND.			QUEBEC.			TOTAL.		
	No. of Vessels.	Tonnage.	No. of Men.	No. of Vessels.	Tonnage.	No. of Men.	No. of Vessels.	Tonnage.	No. of Men.	No. of Vessels.	Tonnage.	No. of Men.	No. of Vessels.	Tonnage.	No. of Men.
1882.....	588	22,841	5,343	120	2,171	531	15	389	74	63	2,210	538	786	27,611	6,486
1883.....	700	29,788	6,238	126	2,102	496	16	450	66	62	2,236	443	904	34,576	7,243
1884.....	700	29,828	6,327	139	2,289	560	16	582	92	56	1,965	382	911	34,664	7,361
1885.....	629	27,709	5,897	128	2,120	496	19	597	113	55	1,791	317	831	32,217	6,823
1886.....	562	25,375	5,022	145	2,628	520	32	1,071	215	52	1,730	320	791	30,804	6,077
1887.....	566	24,520	4,900	154	2,889	563	38	1,677	338	54	1,883	334	812	30,969	6,135
1888.....	589	26,008	5,450	150	2,545	544	37	1,245	249	51	1,842	388	827	31,640	6,631
1889.....	597	27,123	5,684	153	2,590	565	35	1,274	239	48	1,729	330	833	32,716	6,818
1890.....	540	23,955	4,935	133	2,129	447	32	1,002	203	34	1,182	220	739	28,268	5,805
1891.....	527	22,780	4,618	124	2,051	411	27	778	155	27	924	168	705	26,533	5,352
1892.....	507	22,279	4,611	108	1,683	343	30	983	139	23	803	159	668	25,748	5,252
1893.....	536	23,195	4,780	210	2,922	634	27	910	151	32	952	179	805	27,979	5,744
1894.....	602	24,735	5,077	238	3,189	721	21	594	114	38	1,066	178	899	29,584	6,090
1895.....	603	25,018	5,184	238	3,107	764	27	769	129	39	1,262	173	907	30,156	6,250
1896.....	553	23,415	4,607	250	3,337	800	23	656	114	36	1,143	144	862	28,551	5,665
1897.....	507	21,323	4,829	239	3,079	816	20	490	109	24	833	116	790	25,725	5,870
1898.....	505	20,868	4,840	239	3,155	859	24	561	125	16	524	77	784	25,108	5,901
1899.....	519	22,538	5,323	238	3,131	885	15	373	76	17	497	78	789	26,539	6,362
1900.....	525	22,474	5,352	234	2,969	890	29	737	153	14	459	76	802	26,639	6,471
1901.....	508	21,469	5,158	242	3,229	872	23	541	115	13	366	69	786	25,605	6,214
1902.....	505	21,248	5,126	249	3,293	972	28	630	135	13	350	51	795	25,521	6,284
1903.....	546	21,992	5,173	259	3,454	971	36	765	169	10	290	48	851	26,501	6,361
Total..	12,414	530,481	114,474	4,116	60,062	14,660	570	17,074	3,273	777	26,037	4,788	17,877	633,654	137,195

SESSIONAL PAPER No. 22

(3) NUMBER of Boats and boat fishermen which received Bounty in each year.

YEAR.	NOVA SCOTIA.		NEW BRUNSWICK.		P. E. ISLAND.		QUEBEC.		TOTAL.	
	No. of Boats.	No. of Men.	No. of Boats.	No. of Men.	No. of Boats.	No. of Men.	No. of Boats.	No. of Men.	No. of Boats.	No. of Men.
1882	6,043	12,130	1,024	2,530	1,087	3,070	3,071	5,716	11,225	23,446
1883.....	6,458	13,553	1,453	3,309	1,098	3,106	3,266	6,188	12,275	26,156
1884.	6,257	12,669	1,086	2,505	869	2,346	3,344	6,416	11,556	23,936
1885.....	6,970	13,396	1,460	3,254	1,006	2,606	3,857	7,485	13,293	26,741
1886.....	7,140	13,351	1,618	3,567	1,048	2,547	4,303	7,981	14,109	27,446
1887.....	7,662	13,997	1,804	3,994	1,088	2,711	4,051	7,550	14,605	28,252
1888.....	7,840	14,115	1,876	4,148	797	2,141	4,259	7,852	14,772	28,256
1889.....	7,926	14,118	2,237	5,032	1,475	3,568	4,602	8,807	16,240	31,525
1890.....	8,886	15,738	2,324	5,242	1,192	3,024	4,766	9,241	17,168	33,245
1891.....	9,525	16,552	1,928	4,126	1,383	3,427	4,865	9,402	17,701	33,507
1892.....	7,679	12,307	893	1,765	1,021	2,047	4,181	7,693	13,774	23,812
1893.....	7,308	11,748	671	1,314	985	1,962	3,866	7,245	12,830	22,269
1894.....	7,956	12,899	661	1,281	913	1,813	3,821	7,139	13,351	23,132
1895.....	8,222	13,106	737	1,434	998	2,141	3,916	7,877	13,873	24,558
1896.	8,008	12,454	814	1,553	1,095	2,126	4,189	7,688	14,106	23,821
1897.....	7,911	12,542	752	1,351	1,151	2,147	4,125	7,572	13,939	23,612
1898.....	7,872	12,438	678	1,237	1,121	2,199	4,076	7,627	13,747	23,501
1899.....	7,235	11,305	587	1,027	932	1,710	4,085	7,696	12,839	21,738
1900.....	6,927	10,645	670	1,184	1,140	2,198	4,237	8,004	12,974	22,031
1901.....	6,836	10,464	584	1,001	914	1,735	4,254	8,017	12,588	21,217
1902.....	6,166	9,442	545	966	884	1,638	4,333	8,180	11,928	20,226
1903.....	5,738	8,775	571	964	938	1,722	4,080	7,688	11,327	19,149
Total. . . .	162,56	277,744	24,973	52,784	23,135	51,984	89,547	169,064	300,220	551,576

(4) TOTAL Number of men receiving Bounty in each year.

YEAR.	NOVA SCOTIA.	NEW BRUNSWICK.	P. E. ISLAND.	QUEBEC.	Total.
	No. of Men.	No. of Men.	No. of Men.	No. of Men.	
1882	17,473	3,061	3,144	6,254	29,932
1883.....	19,791	3,805	3,172	6,631	33,399
1884.....	18,996	3,065	2,438	6,798	31,297
1885.....	19,293	3,750	2,719	7,802	33,564
1886.....	18,373	4,087	2,762	8,301	33,523
1887.....	18,897	4,557	3,049	7,884	34,387
1888.....	19,565	4,692	2,390	8,240	34,887
1889.....	19,802	5,597	3,807	9,137	38,343
1890.....	20,673	5,689	3,227	9,461	39,050
1891.....	21,170	4,537	3,582	9,570	38,859
1892.....	16,918	2,108	2,186	7,852	29,064
1893.....	16,528	1,948	2,113	7,424	28,013
1894.....	17,976	2,002	1,927	7,317	29,222
1895.....	18,290	2,198	2,270	8,050	30,808
1896.....	17,061	2,353	2,240	7,832	29,486
1897.....	17,371	2,167	2,256	7,688	29,482
1898.....	17,278	2,096	2,324	7,704	29,402
1899.....	16,628	1,912	1,786	7,774	28,100
1900.....	15,997	2,074	2,351	8,080	28,502
1901.....	15,622	1,873	1,850	8,086	27,431
1902.....	14,568	1,938	1,773	8,231	26,510
1903.....	13,958	1,635	1,901	7,736	25,510
Total.	392,228	67,144	55,267	173,852	688,771

(5) TOTAL annual payments of Fishing Bounty.

YEAR.	Nova Scotia.	New Brunswick.	P. E. Island.	Quebec.	Total.
	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.
1882.....	106,098 72	16,997 00	16 137 00	33,052 75	172,285 47
1883.....	89,432 50	12,395 20	8,577 14	19,940 01	130,344 85
1884.....	104,934 09	13,576 00	9,203 96	28,004 93	155,718 98
1885.....	103,999 73	15,908 25	10,166 65	31,464 76	161,539 39
1886	98,789 54	17,894 57	10,935 87	33,283 61	160,903 59
1887	99,622 03	19,699 65	12,528 51	31,907 73	163,757 92
1888	89,778 90	18,454 92	9,092 96	32,858 75	150,185 53
1889.....	90,142 51	21,026 79	13,994 53	33,362 71	158,526 54
1890	91,235 64	21,108 33	11,686 32	34,210 72	158,241 01
1891.....	92,377 42	17,235 96	12,771 30	34,507 17	156,891 85
1892.....	109,410 39	10,864 61	9,782 79	29,694 35	159,752 14
1893	108,060 67	12,524 09	9,328 62	28,320 72	158,234 10
1894	111,460 03	12,690 80	7,875 79	28,040 18	160,066 80
1895.....	110,765 27	12,919 32	9,285 13	30,598 27	163,567 99
1896.....	98,048 95	13,602 88	9,745 50	32,992 44	154,389 77
1897.....	102,083 50	13,454 50	9,809 00	32,157 00	157,504 00
1898	103,730 00	13,746 00	10,188 00	31,795 00	159,459 00
1899	106,598 50	13,514 50	7,822 00	32,065 00	160,000 00
1900.....	101,448 00	13,562 50	10,589 00	33,203 00	158,802 50
1901.....	101,024 50	13,420 50	8,335 50	33,161 50	155,942 00
1902.....	100,455 70	14,555 80	8,716 55	36,125 45	159,853 50
1903.....	99,714 15	14,872 75	9,652 50	34,704 30	158,943 70
Total... ..	2,219,210 74	334,024 92	226,224 62	695,440 35	3,474,910 63

SESSIONAL PAPER No. 22

List of Vessels which received Fishing Bounty during the Year 1903-04.

PROVINCE OF NOVA SCOTIA.

ANNAPOLIS COUNTY.

Official Number	Name of Vessel.	Port of Registry.	Tonnage.	Name of Owner or Managing Owner.	Residence.	No. of Crew Paid.	Amount of Bounty Paid.
							\$ cts.
111837	A. L. B.....	Digby.....	22	Alton Bent.	Phinney's Cove..	3	43 90
80093	Anna K.	St. John.....	14	Edward Fales.....	Wilnot.	3	15 90
103066	Eddie J.	Yarmouth.....	23	David Hayden.....	Thornes Cove...	6	66 80
100315	Freddie A.	"	10	Norman Gregory ..	Granville.....	6	53 80
94835	Georgie Linwood..	Digby.....	25	John McGranahan...	Margaretville...	2	39 60
107472	Goldie G.....	"	15	Watson Guest.....	Young's Cove...	1	22 30
107478	Jessie C.....	"	10	Lewis Sabean.....	Port Lorne.....	2	24 60
111998	Jessie K.....	Annapolis.....	11	Sydney Oliver.....	Parker's Cove...	3	32 90
94732	Only Son.....	Windsor.	13	James D. Aldred....	Margaretville...	2	27 60
100539	Rowena.	Digby.....	10	John Peters.....	Litchfield.....	3	31 90
107293	S. C. H.....	Annapolis.....	46	John S. Hayden....	Victoria Beach..	6	92 80
100548	Violetta.....	Digby.....	11	Bernard Longmire...	Hilsburn.	4	40 26

ANTIGONISH COUNTY.

90642	Komaroff	Yarmouth	10	John J. Brow.....	Harb'r Bouché..	3	31 90
-------	----------------	----------------	----	-------------------	-----------------	---	-------

CAPE BRETON COUNTY.

112376	Agnes.	Arichat.....	15	Patrick Wadden.....	Scatarie Island..	3	36 90
100389	Annie F.....	Sydney	13	John Farrell.....	Main à Dieu....	3	34 90
100372	Betsy Jane.....	"	11	Samuel Moore	Little Bras d'Or.	4	40 20
85381	Champion.	"	19	John William.....	Louisburg	2	33 60
100381	Katie B.	"	24	David A. Tutty.....	"	5	60 50
103458	K. McKenzie.....	Arichat.....	17	Thomas Peach.....	Port Morien....	6	60 80
107360	Ovando.	Sydney	11	Patrick Campbell...	Main a Dieu....	3	32 90
100566	Rob S.....	Halifax.....	21	Gilbert Tutty.....	Big Loraine....	4	50 20
107376	Rozzie.....	Sydney	17	Joseph Degaut.....	Little Bras d'Or.	6	60 80
103464	St. Patrick.....	Arichat.....	27	Lewis Dickson.....	Louisburg	6	70 80
107359	Victoria.....	Sydney	11	James Turner.....	Glace Bay.....	4	40 20
107351	Wilfred Laurier...	"	10	Philip Pike.....	North Sydney...	2	24 60

DIGBY COUNTY,

83431	Acadian.....	Weymouth.....	32	Edwin Haines.....	Freeport.	11	112 30
107476	Addie B.....	Digby.....	13	Albert Thompson....	Westport.	5	49 50
112286	A. E. Moore.	"	11	James A. Moore.....	"	4	40 20
111528	Alart.....	"	11	Stephen A. Doucette.	Mavilette	5	47 50
88598	Alph B. Parker ..	St. John.....	47	Holland D. Outhouse.	Tiverton.....	12	134 60
111524	Annie Laurie.....	Digby.....	10	Stephen Perry	Freeport.....	3	31 90
90655	Annina.....	Yarmouth.....	12	Stephen Haynes.....	Digby.....	5	48 50
100547	B & C.....	Digby.....	14	Loran E. Perry....	Freeport..	5	50 50
94698	Carrie H.	"	20	Norman Robbins.....	Tiverton.	8	78 40
94704	Charles Haskell...	"	67	John W. Snow.....	Digby.....	9	132 70
74331	Condor.....	Yarmouth.....	11	Howard Titus.....	Westport.	5	47 50
103181	Curlew.....	Digby.....	63	George Denton.....	"	17	187 10
107112	Daisy Linden	"	97	David Sproul.....	Digby.....	20	226 00
103789	Effie B. Nickerson..	Shelburne	22	Robert A. Trenholm.	Sandy Cove....	3	43 90
77740	Elmer.	Digby.....	15	Howard Anderson ..	Digby.....	4	44 20
103749	Emerald	"	29	John H. Syda.....	"	13	123 90
107604	Emma D.....	Weymouth.....	20	Frank S. Doucett....	Mavilette.....	8	78 40
94707	Ernest F. Norwood	Digby.....	79	Joseph E. Snow.....	Digby.....	7	130 10
107475	Ethel May.....	"	16	R. E. Hudson.....	"	2	30 60
75757	Etta.....	Yarmouth.....	17	Clarence Webber....	Westport.	3	38 90
111527	Etta H.....	Digby.....	10	Freeman Welch.....	"	3	31 90
112281	Eveline.....	"	22	Caesar Robicheau...	Meteghan.....	6	65 80

4-5 EDWARD VII., A. 1905

LIST of Vessels which received Fishing Bounty, &c.—Nova Scotia—*Con.*DIGBY COUNTY—*Continued.*

Official Number.	Name of Vessel.	Port of Registry.	Tonnage.	Name of Owner or Managing Owner.	Residence.	No. of Crew paid.	Amount of Bounty paid. \$ cts.
74329	Fairy Queen.....	Yarmouth.....	13	Wallace Coggins....	Westport.....	3	34 90
100891	Fleur-de-Lis.....	Digby.....	17	Owen Donnelly.....	Digby.....	6	60 80
80798	Freddie G.....	".....	18	E. C. Bowers.....	Westport.....	7	69 10
77963	Freeman Colgate...	St. Andrews....	26	Stewart Hicks.....	".....	11	106 30
107480	Hattie & Eva.....	Digby.....	11	Milton Hains.....	Freeport.....	4	40 20
111688	Hazelwood.....	Shelburne.....	29	George C. Stevens...	".....	10	102 30
77786	Hesperus.....	Halifax.....	17	Howard Anderson....	Digby.....	5	53 50
111530	Island Girl.....	Digby.....	10	Milton Hains et al....	Freeport.....	4	39 20
100064	Isma.....	St. John.....	31	Thomas Hicks.....	Westport.....	11	111 30
111525	James W. Cousins..	Digby.....	87	J. F. Milberry.....	Digby.....	20	226 00
111839	Lavinia D.....	".....	21	James Doucette.....	Mavilette.....	8	79 40
75851	Little Annie.....	Weymouth.....	16	Alfred Sullivan.....	Meteghan.....	7	67 10
85534	Lloyd.....	Yarmouth.....	31	W. H. Anderson.....	Digby.....	9	96 70
100487	Mabel B.....	Digby.....	57	Chas. E. Finigan.....	Freeport.....	14	159 20
107479	Marguerite.....	".....	24	David Sproul.....	Digby.....	9	89 70
88583	Mary Odell.....	".....	14	John T. Therrieau....	Meteghan.....	6	57 80
107477	Mandie Ellen.....	".....	14	David Sproul.....	Digby.....	7	65 10
100574	Melrose.....	Lunenburg.....	71	Augustus J. Haycock..	Westport.....	13	165 90
103705	Nebula.....	Yarmouth.....	24	James S. Ellis.....	Digby.....	8	82 40
112288	Nellie D.....	Digby.....	32	Raymond J. Deveau..	Mavilette.....	3	97 70
100895	New Home.....	Weymouth.....	31	Chas. Comeau.....	Comeauville....	3	52 90
111471	Quickstep.....	Arichat.....	83	David Sproul.....	Digby.....	8	138 40
111834	Rosan.....	Digby.....	11	Frank J. Doucett.....	Mavilette.....	4	40 20
111835	Roxana.....	".....	11	Ainsley Titus.....	Westport.....	4	40 20
85558	S. A. Crowell.....	Yarmouth.....	23	Wallace Gower.....	".....	7	74 10
111840	Sparrow.....	Digby.....	28	Moses Theriault.....	Meteghan.....	4	57 20
111529	Spray.....	".....	12	Benj. Taylor.....	Smith's Cove...	2	26 60
107610	St. Bernard.....	Weymouth.....	24	Peter Belliveau.....	Belliveau's Cove.	7	75 10
111833	Sunlocks.....	Digby.....	59	Edward Keans.....	Digby.....	14	161 20
100609	Swan.....	Shelburne.....	56	Milton Hains.....	Freeport.....	13	150 90
94694	Utah and Eunice..	Digby.....	33	Edwin Haines.....	".....	9	98 70
94832	Venus.....	St. Andrews....	42	Milton Hains.....	".....	14	144 20
103704	Whisper.....	Yarmouth.....	31	Wm. McGrath.....	Digby.....	7	82 10
100543	W. Parnell O'Hara.	Digby.....	79	E. & J. W. Snow.....	".....	16	195 80

GUYSBORO COUNTY.

90866	Alice.....	Halifax.....	12	Caleb Peart.....	Guysboro'.....	4	41 20
107992	Alice J. Davis.....	Canso.....	20	Edward Ham.....	Canso.....	7	71 10
111422	Annie B.....	Halifax.....	26	Benjamin Boudrot....	Port Felix.....	3	47 90
112021	Annie M.....	Canso.....	29	John O'Leary.....	Queensport....	5	65 50
112016	Blanche.....	".....	13	Simon Williams.....	Canso.....	5	49 50
103537	Bonacord.....	Halifax.....	12	Benj. L. Pelrine.....	Larry's River..	6	55 80
112020	Bonny Kate.....	Canso.....	14	J. W. Sproul.....	Canso.....	5	59 50
96923	Cardigan.....	Charlottetown..	38	Joseph Fougère.....	Larry's River..	6	81 80
112375	C. G. Munroe.....	Arichat.....	14	Chas. Mosher.....	White Head....	5	50 50
103328	Ella May.....	Port Hawkesb'ry	34	Hibbert Carr.....	Mulgrave.....	5	70 50
116347	Ethel.....	Arichat.....	11	James W. Lumsden...	Hazel Hill.....	3	32 90
107993	Florence May.....	Canso.....	11	W. G. Matthews.....	Canso.....	4	40 20
112373	Flying Cloud.....	Arichat.....	13	Stephen Marshall....	Cook's Cove...	4	42 20
106818	Geneva Ethel....	Barrington.....	29	Martin Meagher.....	Canso.....	4	58 20
94963	Golden Seal.....	Halifax.....	32	Edward B. Pelrine....	Larry's River..	4	61 20
107996	Green Linnet.....	Canso.....	12	C. B. McKenzie.....	Canso.....	5	48 50
100815	Happy Home.....	Barrington.....	10	Samuel Snow.....	Up. White Head	6	53 80
111908	Laura B. G.....	Arichat.....	10	Peter Levangie.....	Larry's River..	4	39 20
111910	Lizzie J. Greenleaf.	".....	11	Joseph H. Richard....	Charlo's Cove...	4	40 20
100835	Lottie B.....	Lunenburg.....	12	Thomas Boudrot.....	Dover.....	5	48 50
111421	Maple Leaf.....	Halifax.....	25	Norman S. Corkum....	Beckerton.....	7	76 10
112017	Marconi.....	Canso.....	55	Chas. Lohnes.....	Canso.....	15	164 50

SESSIONAL PAPER No. 22

List of Vessels which received Fishing Bounty, &c.—Nova Scotia—*Con.*

GUYSBORO' COUNTY—*Concluded.*

Official Number.	Name of Vessel.	Port of Registry.	Tonnage.	Name of Owner or Managing Owner.	Residence.	No. of Crew paid.	Amount of Bounty paid.
							\$ cts.
111909	Margaret May.....	Arichat.....	12	Jno. Kavanagh.....	Canso.....	5	48 50
112371	Mary A.....	".....	11	Alex. Pembroke.....	".....	4	40 20
103859	Mary May.....	Halifax.....	23	Benj. David.....	Port Felix.....	6	66 80
107999	Maud S.....	Canso.....	12	J. W. Sproul.....	Canso.....	4	41 20
100816	Mattie Morrissey.....	".....	24	Jas. Meagher.....	".....	4	53 20
38417	Messenger.....	Arichat.....	30	Jesse M. Hunson.....	Mulgrave.....	2	44 60
112022	Minnie J.....	Canso.....	14	Jas. W. Feltmate.....	Whitehead.....	5	50 50
100446	Minnie May.....	".....	12	Chas. H. Richard.....	Charlo Cove.....	6	55 80
100450	Minto.....	".....	18	Wm. O'Hara.....	Canso.....	6	61 80
107998	Money Bush.....	".....	15	Thos. Richard.....	Port Felix.....	6	58 80
103547	Morning Glory.....	Halifax.....	11	John J. Gerrior.....	Larry's River.....	4	40 20
103323	Nita.....	Pt. Hawkesbury	22	Lewis Maguire.....	Mulgrave.....	3	43 90
112378	Olive S.....	Arichat.....	17	Milton S. ngster.....	New Harbour.....	6	60 80
92663	Prince Edward.....	Ottawa.....	18	Andrew C. Fanning.....	Seal Harbour.....	4	47 20
64033	Ripple.....	Pt. Hawkesbury	34	Leander Tanner.....	Cole Harbour.....	2	48 60
112372	River Swan.....	Arichat.....	11	Joseph Bonvie.....	Larry's River.....	4	40 20
112023	Silver Bell.....	Canso.....	14	George Shrader.....	Tor Bay.....	3	35 90
108000	St. Patrick.....	".....	18	George L. Avery.....	Larry's River.....	5	54 50
107318	St. Stephen.....	Halifax.....	19	Moses Cohoon.....	Canso.....	1	26 30
96962	Sunrise.....	Yarmouth.....	18	Thurlo Munroe.....	Lr. White Head.....	3	39 90
100448	Surprise.....	Canso.....	15	John J. Meagher.....	Canso.....	7	66 10
103199	Trilby.....	".....	12	Edward Flaherty.....	".....	4	41 20
107994	True Love.....	".....	10	David Walsh.....	".....	3	31 90
107991	Two Brothers.....	".....	14	Frederick Jello.....	Port Felix.....	7	65 10
112019	Unidella.....	".....	16	Norman Munroe.....	White Head.....	6	59 80

HALIFAX COUNTY.

111436	Adele.....	Halifax.....	30	Jno. C. Martin.....	Ketch Hbr.....	10	103 00
107313	Alice A.....	".....	16	Wm. McPherson.....	Tangier.....	4	45 20
103507	Annie.....	".....	16	Isaac Bowser.....	Musquodoboit H.....	3	37 90
103858	B & B Holland.....	".....	26	Richard Holland.....	Ketch Hbr.....	7	77 10
94662	Bessie Florence.....	".....	12	James Howard.....	Terence Bay.....	6	55 80
90496	Black Prince.....	".....	18	George Julien et al.....	W. Chezzetcook.....	5	54 50
116278	Christie Belle.....	".....	13	Russell Keizer.....	Smiths Cove.....	3	34 90
59484	Day Spring.....	".....	36	George L. Baker.....	W. Jeddore.....	8	94 40
111428	Duchess.....	".....	12	Austin Zwickler.....	Indian Hbr.....	4	41 20
111425	Effie Howard.....	".....	23	Jno. D. Verge.....	Sober Island.....	6	66 80
90726	Ellen Maud.....	".....	16	Geo. H. Fluck.....	Halifax.....	3	37 90
111434	Ermynthrude.....	".....	36	Fred'k J. Darrach.....	Herring Cove.....	10	109 00
107320	Eva Gertrude.....	".....	34	Andrew Sullivan.....	".....	9	99 70
92564	Evangeline.....	".....	23	Lewis Murphy.....	Pleasant Hbr.....	5	59 50
100247	Fairy Queen.....	".....	11	Geo. H. Nickerson.....	Sambro.....	3	32 90
100259	Florence G.....	".....	15	Caleb Gray.....	".....	3	36 90
116273	Fly.....	".....	10	John Faulkner.....	West Jeddore.....	4	39 20
107330	Gertie M. Starr.....	".....	16	Wm. A. Martin et all.....	Smith's Cove.....	5	52 50
111432	Gladys Elena.....	".....	16	Chas. W. Twohig.....	Pennant.....	5	52 50
107319	Globe.....	".....	32	Chas. W. Hart.....	Sambro.....	12	119 60
103544	Grace D.....	".....	10	Geo. Slaunwhite.....	Terence Bay.....	4	39 20
112131	Grace D. Day.....	Shelburne.....	59	Oswald Dauphinee.....	Boutilier's Code.....	9	104 70
111747	Grace Darling.....	Lunenburg.....	100	".....	".....	17	204 10
88220	Grandee.....	Halifax.....	14	Jeremiah Slaunwhite.....	Terence Bay.....	3	35 90
103191	Jennie B.....	".....	13	Hezekiah Wambolt.....	Indian Hbr.....	5	49 50
100216	Katie M.....	".....	11	Chas. Nelson.....	Halifax.....	3	32 90
103312	Laura.....	Pt. Hawkesbury	13	Reuben Cooper.....	Tangier.....	4	42 20
116203	Laurel.....	Halifax.....	16	Geo. Pelham.....	Herring Cove.....	3	37 90
107113	L. Morton.....	".....	60	Simeon Coolen.....	Hubbards Cove.....	8	118 40
94665	Louis Luby.....	".....	41	Martin Julien et al.....	W. Chezzetcook.....	14	142 20
111424	Maggie M.....	".....	13	Jas. Marryatt.....	Pennant.....	3	34 90

List of Vessels which received Fishing Bounty, &c.—Nova Scotia—*Con.*

Official number.	Name of Vessel.	Port of Registry.	Tonnage.	Name of Owner or Managing Owner.	Residence.	No. of Crew paid.	Amount of Bounty paid. \$ cts.
96805	Maggie May	Halifax	62	Jeremah Fillis et al. . .	W. Chezzetcook.	18	193 40
111435	Maggie Wilson	"	36	Edward Dempsey, sr. . .	Herring Co.	9	101 70
111440	M. A. Josey.	"	17	Leander Josey et al. . .	Spry Bay.	6	60 80
85664	Mary E.	"	14	Walter Slaunwhite. . . .	Terence Bay.	6	57 80
100227	May	"	10	Thomas E. Little.	"	3	31 90
100254	Myrtle M. Gray.	"	19	Jas. Gray	Pennant	7	70 10
85665	Nellie D.	"	12	William Munro.	Sober Island.	3	33 90
103533	Neva	"	11	Ephraim Marryatt	Pennant.	2	25 60
80841	Nima.	"	13	Joseph Parker et al. . . .	Owls Head.	3	34 90
94677	Progress	"	14	David Richardson.	Lr. Ship Hbr.	4	43 20
116272	Rosie M. B.	"	75	Daniel Bonaing et al. . . .	W. Chezzetcook.	16	191 80
100255	Seaflea.	"	12	Richard Hutt et al.	Owls Head.	4	41 20
111438	Theresa M. Gray.	"	30	Angus Gray.	Pennant.	12	117 60
103869	Uganda.	"	14	James B. Stoddard.	Ship Hbr. . . . .	..	14 00
100260	Violet.	"	12	James H. Smith	Sambro.	2	26 60
92578	Willetta.	"	12	Joseph Gray	"	5	48 50
85378	Zephyr.	"	16	Robt. Slaunwhite.	Terence Bay.	6	59 80

INVERNESS COUNTY.

96778	Campania.	Pt. Hawkesbury	11	C. Robin, Collas & Co.	Eastern Hbr.	5	47 50
103313	Catherine.	"	10	"	"	5	46 50
96825	Cecelia W.	Halifax.	41	David Walker.	Pt. Hawkesbury	7	92 10
83244	Claribel.	Charlottetown.	19	Evariste Doucet	Eastern Hbr.	7	70 10
103325	Elizabeth Ann.	Pt. Hawkesbury	11	David Bourgeois.	"	5	47 50
103542	Emma Brow.	Halifax.	17	Simeon Bellefontaine. . .	"	6	60 80
96774	Florence.	Pt. Hawkesbury	11	"	"	6	54 80
103317	Flying Star.	"	11	"	"	5	47 50
107997	Gertie Belle.	Canso	15	C. Robin, Collas & Co.	"	5	51 50
103316	Laura.	Pt. Hawkesbury	10	Ubaldo Bourgeois.	"	4	39 20
103315	Lillie.	"	12	Peter Fiset.	"	4	41 20
96775	Louise.	"	11	Simeon Bellefontaine. . .	"	5	47 50
103330	Lucy.	"	11	Theophile Maillet.	"	4	40 20
96779	Majestic.	"	12	C. Robin, Collas & Co	"	5	48 50
96771	Marie.	"	10	John Roach	"	4	39 20
96777	Marie Joseph.	"	11	Victor Roach.	"	4	40 20
103314	Mary	"	10	Peter Fiset.	"	5	46 50
96769	Mary Lambert.	"	11	Chas. L. Chiasson.	Cheticamp	5	47 50
69125	May Flower.	Halifax.	20	Hyacinthe Chiasson. . . .	Eastern Hbr	6	63 80
103326	Mizpah.	Pt. Hawkesbury	10	George LeBrun.	"	4	39 20
96770	O. L. B.	"	12	David Chiasson	Grand Etang	4	41 20
111792	Saint Aubin.	"	15	C. Robin, Collas & Co	Eastern Hbr	6	58 80
103329	Saint Helier.	"	12	"	"	5	48 50
96773	Virgin.	"	10	Michel Ramard.	"	5	46 50
111793	Walla Walla.	"	11	Simeon Bellefontaine. . .	"	4	40 20
96776	Willie B.	"	21	"	"	5	57 50
100812	Wyvern.	Barrington.	25	Patrick LeFort.	"	8	83 40

KINGS COUNTY.

83261	Economist.	Digby.	14	Jesse Parker.	Hall's Hbr.	2	28 60
88549	Frank.	Halifax.	12	C. H. Hagerty	Canada Creek. . . .	1	19 30
42049	Lily	St. Andrews.	10	Hantford Rawding	"	1	17 30
94756	Sarah E. Ells	St. John.	19	Leonard Houghton.	Hall's Hbr.	3	40 90

SESSIONAL PAPER No. 22

LIST of Vessels which received Fishing Bounty, &c.—Nova Scotia—*Con.*

LUNENBURG COUNTY.

Official Number.	Name of Vessel.	Port of Registry.	Tonnage.	Name of Owner or Managing Owner.	Residence.	No. of Crew paid.	Amount of Bounty paid. \$ cts.
112126	Acadia..	Lunenburg	91	Alexr. Knickle.....	Lunenburg	18	211 40
111641	Aguadilla.	"	100	Freeman Anderson....	"	18	211 40
107953	Ahava.	"	85	Wm. C. Smith.....	"	15	189 50
111728	Alameda	"	93	Chas. L. Silver..	"	17	204 10
107644	Albertha	"	94	Wm. Hubley.....	"	17	204 10
107657	Alcaea	"	99	Alexr. Knickle.....	"	17	204 10
112115	Aldine	"	99	A. V. Conrad.....	Parks Creek	17	204 10
111745	Alexa..	"	99	E. F. Zwicker.....	Lunenburg	17	204 10
112107	Alexandra.	"	93	Freeman Anderson.	"	17	204 10
111647	Alhambra	"	90	Thomas Hamm..	"	18	211 40
111738	Alice Gertrude....	"	81	J. Norman Rafuse....	Conquerall Bank	21	233 30
112105	Alma Nelson	"	99	Christian Geldert....	Lunenburg	18	211 40
112101	Ambition.....	"	100	Willet Conrad.....	"	17	204 10
107955	Annie C. Hall.	"	74	Henry Selig	Vogler's Cove...	18	205 40
111737	Annie M. W.	"	98	J. N. Wolfe	Getson's Cove...	16	196 89
111750	Arabia	"	80	David Heisler.	Lunenburg	17	204 10
100472	Arcana	"	87	Alexr. Knickle.....	"	15	189 50
112102	Ariadne.	"	48	James Bell.	Hublin Shore...	13	142 90
112122	Atalaya.	"	79	S. D. Herman	Lunenburg	16	195 80
103495	Athlon	"	99	Wm. C. Smith.....	"	17	204 10
112088	Australia.....	"	89	John McLean.....	Mahone Bay...	13	174 90
103745	Avis	"	100	Simon Parks.....	Parks Creek..	18	211 40
111740	Azalea	"	80	James A. Hirtle.....	Lunenburg	16	196 80
111412	Baden Powell..	"	94	Benj. Knock.....	"	18	211 40
103501	Barcelona.....	"	99	James Romkey.....	Ritcey's Cove...	18	211 40
111734	Blake.	"	99	J. Norman Rafuse....	Conquerall Bank	21	233 30
100838	Blanche A Colp....	"	96	H. W. Adam.	Lunenburg	11	160 30
100571	Britannia..	"	90	Willet Conrad.....	"	18	211 40
111732	Calavera.....	"	90	Henry Mosher.....	"	18	211 40
112128	Campania	"	90	Samuel Ritcey.....	Ritcey's Cove..	18	211 40
112118	Campanula	"	93	Alexr. Knickle..	Lunenburg	15	189 50
112116	Cardinia.....	"	100	Freeman Anderson.	"	20	226 00
111718	Carl E. Richard ...	"	99	Elias Richard, sr....	Getson's Cove...	17	204 10
103502	Cariraine.	"	99	John Himmelman....	Lunenburg	17	204 10
111749	Champion.....	"	79	Jeffrey Publicover ...	Getson's Cove...	17	2 3 10
111415	Clara	"	100	Abraham Ernst.....	Mahone Bay.	19	218 70
111739	Clarence B.	"	90	"	"	17	204 10
103415	Clarence Smith	"	95	Wm. C. Smith.....	Lunenburg	18	211 40
107122	Collector	"	99	W. N. Reinhardt.	La Have..	18	211 40
111702	Colonia	"	98	David Westhaver	Lunenburg	16	196 80
103759	Columbia	"	99	J. A. Silver.	"	17	204 10
111650	Concord.	"	79	Norman Reinhardt.	La Have...	17	203 10
111743	Corean	"	70	J. N. Rafuse	Conquerall Bank	17	194 10
111736	Coronation	"	98	H. W. Adams.....	Lunenburg	17	204 10
111708	Crofton McLeod...	"	85	J. W. McLean.....	Mahone Bay	17	204 10
111637	Cyril.	"	100	Thos. A. Wilson.	Bridgewater...	16	196 80
111405	Deeta M.	"	81	John McLean.....	Mahone Bay.	13	174 90
111711	Defender	"	98	Alexr. Knickle.....	Lunenburg	18	211 40
111710	Demering.....	"	85	Jessen Anderson.....	"	18	211 40
107986	Dove	"	95	Wm. C. Acker.....	"	17	204 10
111730	Earle V. S.	"	100	Howard Wynacht....	"	17	204 10
112099	Electro	"	88	Edmen Walters.....	Mid. La Have..	18	211 40
107127	Ellen L. Maxner...	"	93	H. W. Adams.....	Lunenburg	17	204 10
111748	Elena.	"	73	A. V. Comad.....	Parks Creeks..	17	197 10
83398	Ella.....	Liverpool	10	Jennis C. Hanson....	Mahone Bay.	1	17 30
103424	Elva M.	Lunenburg	92	C. U. Mader.....	"		80 00
107123	Emulator	"	99	Stephen Oxner.....	Ritcey's Cove	17	204 10
112087	Ethel.	"	99	W. N. Reinhardt.	La Have..	18	211 40
111727	Excelda.	"	100	Chas. L. Silver....	Lunenburg	18	211 40
103743	Flo F. Mader.....	"	100	C. U. Mader..	Mahone Bay...	17	204 10
111406	Flora W. Sperry..	"	95	John D. Sperry...	Petite Rivière.	17	204 10
111401	Frances Willard ...	"	97	James A. Hirtle....	Lunenburg	17	204 10

4-5 EDWARD VII., A. 1905

LIST of Vessels which received Fishing Bounty, &c.—Nova Scotia—*Con.*LUNENBURG COUNTY—*Continued.*

Official Number.	Name of Vessel.	Port of Registry.	Tonnage.	Name of Owner or Managing Owner.	Residence.	No. of Crew paid.	Amount of Bounty paid.
111746	Fredonia	Lunenburg	92	C. U. Mader	Mahone Bay....	18	211 40
103753	Gladys B. Smith...	"	99	Benj. C. Smith	Lunenburg	21	233 30
111742	Glenwood.....	"	99	David Heisler	"	19	218 70
103752	Glyndon.. ..	"	99	James Romkey.	Ritceys Cove ...	17	204 10
107289	G. S. Troop	"	99	L. B. Currie	West Dublin....	17	204 10
107951	Harry Lewis.....	"	83	Wm. C. Smith.....	Lunenburg	17	204 10
112129	Hattie.....	"	12	Robt. Walfield.....	La Have Islands	4	41 20
112111	Havana	"	100	A. V. Conrad.....	Parks Creek....	17	204 10
107965	Hazel B. Mosher...	"	72	Thomas Hamm.....	Lunenburg	15	181 50
111640	Hazel L. K.	"	88	"	"	17	204 10
111418	H. H. Kitchener...	"	100	James Shankle.....	E. M. La Have..	18	211 40
107659	Hilda C.	"	99	S. W. Oxner.....	Lunenburg	19	218 70
112109	Hispaniola.....	"	91	Adam Knickle.....	"	17	204 10
107128	Huron.....	"	84	J. Henry Wilson.....	"	17	204 10
100607	Icelda.....	Shelburne.....	19	John S. Wolfe.....	West Dublin....	3	40 90
103174	Iona.....	"	15	Norman Shandler....	Chester.....	5	51 50
107956	Iona.....	Lunenburg.....	98	Murdoch Mac Gregor..	Ritceys Cove....	17	204 10
112089	Iona W	"	78	Abraham Ernst.....	Mahone Bay....	16	194 80
111638	Ivanhoe.....	"	100	Thos. A. Wilson.....	Bridgewater	14	182 20
107116	Ivy	"	12	John Spindler	Rose Bay.....	3	33 90
103491	Jennie May.....	"	88	Martin B. Westhaver..	Lunenburg	15	189 50
100837	J. M. Young	"	99	John B. Young.	"	17	204 10
111726	Juanita	"	100	Wm. C. Smith.....	"	16	196 80
107960	J. W. Mills.,.....	"	76	J. W. Mills.....	Mahone Bay....	15	188 50
107969	Kandahar	"	100	Wm. C. Smith.....	Lunenburg	17	204 10
107970	Karmoe	"	97	Ammon Ritcey	Ritceys Cove ...	17	204 10
111404	Kimberley.....	"	92	C. U. Mader.....	Mahone Bay....	10	153 00
111410	Kuvera	"	99	James Young.....	Lunenburg	17	204 10
111635	Latooka.....	"	99	A. V. Conrad.....	Parks Creek....	17	204 10
90840	Lena A.	Port Medway....	11	Busby Conrad	Voglers Cove ...	3	32 90
107126	Lena F. Oxner....	Lunenburg.....	99	James Geldert.....	Lunenburg	17	204 10
107660	Lila D. Young....	"	100	John B. Young.....	"	17	204 10
107129	Litla B. Airtle....	"	99	Benj. Anderson....	"	18	211 40
103760	Lillian	"	84	Allan R. Morash.....	"	16	196 80
111717	Linus A.	"	70	Amiel Corkum.....	E. M. LaHave..	15	179 50
83316	Lottie.....	Port Medway....	81	S. E. Teel	Voglers Cove ...	18	211 40
111735	Lucanlar	Lunenburg	99	Murdock Mac Gregor..	Ritceys Cove ...	18	211 40
103420	Luetta	"	98	Isaac Mason.....	Lunenburg	18	211 40
107120	Madeira.....	"	99	Theophilus Creaser....	Ritceys Cove ...	17	204 10
103509	Maggie E. Z.	"	70	Emanuel Zellers.....	Lunenburg	16	186 80
97100	Maggie M. W.	"	90	James A. Hirtle.....	"	17	204 10
112112	Maimie Dell.....	"	98	C. U. Mader.....	Mahone Bay....	17	204 10
103425	Majestic.....	"	99	Reuben Pitcey.....	Ritcey's Cove...	17	204 10
112095	Manhattan	"	100	Wm. C. Smith.....	Lunenburg	18	211 40
111720	Maravilla.....	"	117	"	"	20	226 00
111709	Mariner.. ..	"	100	Simon Parks.. ..	Parks Creek....	17	204 10
112123	Marion	"	72	J. N. Rafuse.....	Conquerall Bank	16	188 80
112110	Markland	"	99	J. W. McLean.....	Mahone Bay....	17	204 10
112119	Mary E. Smith....	"	99	Wm. Smith.....	Lunenburg	17	204 10
111714	Mauna Loa.....	"	99	Wm. C. Smith.....	"	17	204 10
107967	May Myree.....	"	89	Elias Richard, Sr....	Getson's Cove...	21	233 30
112086	Melba.....	"	61	John D. Sperry.....	Petite Rivière...	10	134 00
112100	Meteor.....	"	99	Theophilus Creaser....	Ritceys Cove ...	17	204 10
107650	Mildred	"	100	Abraham Ernst.....	Mahone Bay....	18	211 40
107111	Millie Mace	"	99	Wm. C. Smith.....	Lunenburg	18	211 40
111408	Mindoro.....	"	91	Stephen Oxner.....	Ritceys Cove ...	17	204 10
103757	Minnie J. Heckman	"	100	James R. Rudolf.....	Lunenburg	18	211 40
107952	Minnie M. Cook...	"	84	Wm. C. Smith.....	"	18	211 40

SESSIONAL PAPER No. 22

LIST of Vessels which received Fishing Bounty, &c.—Nova Scotia—*Con.*LUNENBURG COUNTY—*Concluded*

Official Number.	Name of Vessel.	Port of Registry.	Tonnage.	Name of Owner or Managing Owner.	Residence.	No. of Crew paid.	Amount of Bounty paid.	
							\$	cts.
111701	Mizpah	Lunenburg.	100	John B. Young.	Lunenburg.	17	204	10
111645	Moran	"	100	Daniel Getson.	Getson's Point	17	204	10
103758	Muriel	"	100	Elias Walters.	Lunenburg.	16	196	80
107968	New Era	"	116	Reuben Ritcey.	Ritcey's Cove.	17	204	10
112104	Nina	"	10	John Geldert.	Lunenburg.	2	24	60
111729	Olympia	"	99	John Westhaver.	"	17	204	10
61916	Only Son	Liverpool.	16	Wilbert Young.	Mill Cove	4	45	20
111704	Ophir	Lunenburg	99	J. B. Sarty.	Pleasantville.	15	189	50
100245	Oracle	Halifax.	18	L. B. Currie.	West Dublin.	5	54	50
112106	Oregon	Lunenburg.	99	Arthur Creaser.	Ritcey's Cove.	17	204	10
112120	Oressa Bell	"	95	P. B. Zwicker.	Mahone Bay.	17	204	10
111639	Pacific	"	99	J. F. Risser.	Ritcey's Cove.	17	204	10
112124	Palanda	"	78	C. U. Mader	Mahone Bay.	16	194	80
111642	Palatia	"	95	Chas. L. Silver	Lunenburg.	17	204	10
111725	Palmetto	"	98	Chas. Smith.	"	17	204	10
112113	Parana	"	99	Daniel Lohnes.	Ritcey's Cove.	17	204	10
112125	Pearl	"	14	Solomon Richard.	Pleasantville.	5	50	50
111712	Peerless	"	95	Arthur H. Zwicker.	Lunenburg.	17	204	10
103747	Perfect	"	54	Wm. C. Smith.	"	14	156	20
111417	Pilgrim	"	99	Thos. A. Wilson	Bridgewater.	16	196	80
107655	Premier	"	99	James Wamback.	Park's Creek.	17	204	10
111402	Protector	"	95	Thos. A. Wilson	Bridgewater.	17	204	10
107959	Reliance	"	100	Artemas Zinck.	Ritcey's Cove.	17	204	10
111648	Riviera	"	96	Robert Dawson.	Bridgewater.	21	233	30
111723	Roanoke	"	100	Abraham Ernst.	Mahone Bay.	19	218	70
107125	Roma	"	99	Gabriel Himmelman.	Ritcey's Cove.	17	204	10
111741	Saratoga	"	92	C. U. Mader	Mahone Bay.	15	189	50
111643	Scintilla	"	100	Wm. C. Smith.	Lunenburg.	17	204	10
107963	Shamrock	"	89	Alex. Knickle.	"	18	211	40
111413	Sigdrifa	"	13	William Westhaver.	"	1	20	30
112108	Speculator	"	99	A. V. Conrad.	Park's Creek	18	211	40
111744	Stanley	"	100	Thos. A. Wilson	Bridgewater	18	211	40
111407	Strathcona	"	89	Freeman Anderson.	Lunenburg.	17	204	10
103500	St. Helena	"	99	Howard Wynacht.	"	17	204	10
111636	Tasmania	"	99	"	"	17	204	10
107651	Torata	"	92	J. H. Wilson.	"	17	204	10
111733	Transvaal	"	79	Wm. C. Smith	"	16	195	80
112114	Tribune	"	22	Thos. Hamm.	"	6	65	80
112117	Ulva	"	99	A. V. Conrad.	Park's Creek	16	196	80
107957	Ungava	"	88	Wm. Cleversey.	Pleasantville.	21	233	30
103742	Unique	"	95	Abraham Ernst	Mahone Bay	15	189	50
111731	Vendetta	"	93	Thos. Hamm.	Lunenburg.	18	211	40
107964	Vernie May	"	76	Abraham Ernst.	Mahone Bay	15	185	50
100811	Vesta Pearl	"	40	Wm. C. Smith	Lunenburg.	9	105	70
111409	Victoria	"	100	W. N. Reinhardt.	LaHave.	18	211	40
103504	Viking	"	96	Artemas Schnare.	Lunenburg.	17	204	10
111403	Willis, C.	"	82	Amiel Corkum.	E. M. LaHave.	14	182	20
111649	W. S. Wynot	"	100	C. U. Mader.	Mahone Bay.	13	189	50
112127	Yamaska	"	98	P. B. Zwicker	"	17	204	10
107645	Yosemite	"	84	Kenneth Silver.	Dayspring.	19	218	70
111419	Yukon	"	97	Arthur Ritcey.	Ritcey's Cove.	18	211	40

QUEENS COUNTY.

83134	Infant	Lunenburg.	15	Wm. J. Collins.	Summerville.	4	44	20
54132	John Franklin	Halifax.	18	Andrew McNutt	Liverpool.	5	54	50
116583	Louisa A.	Liverpool.	10	Reuben J. Colp.	Port Mouton.	3	31	90
92568	Mary Kate	Shelburne	13	Ratchford Burgess	S.W. Pt. Mouton	3	34	90
103412	Minnie B.	Lunenburg.	25	E. Marine	Port Medway.	4	54	20
94833	News Boy	Port Medway.	16	Calvin Bowlby.	"	2	30	60
116351	Percy Roy	"	99	J. F. Wolfe.	"	18	211	40
100608	Vesper	Shelburne.	14	Robt. Williams.	S.W. Pt. Mouton	5	50	50

4-5 EDWARD VII., A. 1905

LIST of Vessels which received Fishing Bounty, &c.—Nova Scotia—*Con.*RICHMOND COUNTY—*Concluded.*

Official Number.	Name of Vessel.	Port of Registry.	Tonnage.	Name of Owner or Managing Owner.	Residence.	No. of Crew Paid.	Amount of Bounty paid. \$ cts.
88456	Alice May.....	Arichat.....	39	Wm. Le Vesconte....	Riv. Bourgeois..	8	97 40
116344	Annie B. M.	"	18	W. Mombourquette..	L'Ardoise W....	5	54 50
111472	Annie May.....	"	17	Jas. Mambourquette..	Rockdale.	5	53 50
103463	Annie May.....	"	11	Placide Dugas.....	Riv. Bourgeois..	6	54 80
75561	Boreas	Lunenburg.	41	John Colford.....	Port Richmond..	4	70 20
74100	Candid.....	Arichat	23	Desire Burke	Riv. Bourgeois..	7	74 10
72061	C. P. M.....	"	22	Alex. Burke.....	"	6	65 80
116343	Eva May.....	"	11	Samuel Sampson	St. Peters	4	50 20
88462	Fannie S.....	"	28	John Murray.....	Port Richmond..	3	49 90
100383	Florence L.....	Sydney.....	10	Célestin Cordeau..	Riv. Bourgeois..	5	46 50
112380	Florence M.....	Arichat.....	25	Adolp. Mombourquette	L'Ardoise W....	6	68 80
97046	Fredona.....	Liverpool	12	Andrew Fougere....	Riv. Bourgeois..	5	48 50
88509	Guide	Halifax.....	38	Edward Poirier.....	Goulet.....	12	125 60
100161	Hilda Maude ..	Hawkesbury ..	45	John D. Malcom....	Port Malcolm....	7	96 10
111474	Howler.....	Arichat.....	15	Lawrence Lavache....	West Arichat. ...	2	29 60
88513	Ida.....	Sydney.....	10	Vital LeBlanc.....	Riv. Bourgeois..	5	46 50
96764	Ida C. Spoffard ..	Hawkesbury ..	54	Robert Murray.....	Port Richmond..	3	75 90
103470	Ida M. Burke....	Arichat.....	16	Sam. P. Burke.....	St. Peters	5	52 50
111476	Indianna.....	"	11	Jos. Petitpas, sr....	Arichat	2	25 60
100490	Irene M. B.....	Lunenburg.....	66	Frederick Poirier, sr..	D'Escousse.	16	182 80
83135	J. B. M.....	Halifax.....	20	John Landry.....	Petit de Grat....	5	56 50
112374	J. B. Saint.....	Arichat.....	18	Benj. Birett	L'Ardoise	4	47 20
103469	Katie B.....	"	16	John Burke	Riv. Bourgeois..	5	52 50
111480	Lady Laurier ..	"	12	Simon A. Boudrot	Petit de Grat....	4	41 20
111905	Lena Jane.....	"	11	Dominique Boudrot....	"	4	40 20
111901	Lillian Louise....	"	12	Chas. P. Boudrot.....	"	4	41 20
112377	Lilly May.....	"	18	James Kehoe	Rocky Bay.....	5	54 50
103467	Lizzie May.....	"	12	Alfred Boudrot.....	Petit de Grat....	5	48 50
72071	Lumen Diei.....	"	20	Urbain Sampson	Riv. Bourgeois..	4	49 20
107995	Maggie M. F.....	Canso.....	15	R. F. Barrett.....	Arichat.....	3	36 90
103532	Maria A.....	Halifax	22	John Walker.....	Basin R. Inb'ts ..	3	43 90
88522	Mary.....	Arichat.....	23	Peter Landry.....	St. Peters	7	74 10
116345	Mary Alice.....	"	10	Patk. E. Sampson....	Lr. L'Ardoise....	3	31 90
111479	Mary Atalanta ..	"	15	Peter Bouchard.....	Riv. Bourgeois..	4	44 20
116342	Mary Elda.....	"	10	Alex. Landry	"	2	24 60
111475	Mary Matilda....	"	15	Maurice Burke.....	St. Peters	6	58 80
112379	Mary S.....	"	18	James Sampson.....	L'Ardoise	5	54 50
103462	Maud.....	"	20	Henry Doyon	Arichat.....	5	56 50
69213	May Fly	Lunenburg.....	12	Albini Sampson.....	Riv. Bourgeois..	4	41 20
111907	Minnie A.....	Arichat	46	Anselme Sampson....	"	10	119 00
111904	Minnie L.....	"	15	Elias Bois	Petit de Grat....	3	36 90
116346	Native of Foucher..	"	16	John D. McLeod.....	Fourchu.....	3	37 90
74365	Nova Stella.....	"	53	Leon N. Poirier.....	D'Escousse.....	15	162 50
85562	Oresa.....	Halifax....	14	John F. Proctor.....	Port Malcolm....	2	28 60
100231	Pearl.....	"	17	Frederick Boudrot....	Petit de Grat....	6	60 80
72067	Philomen D.....	Arichat.....	22	John Pelham	Jauvrin Island..	4	51 20
100477	Pilot.....	Lunenburg.....	42	Wm. Proctor.....	Riv. Inhabitants..	4	71 20
116341	Preroma.....	Arichat.....	17	Placide Bouchard....	Riv. Bourgeois..	5	53 50
92571	Primrose	Halifax.....	14	Elias V. Landry.....	Petit de Grat....	7	65 10
88504	Quickstep.....	Sydney.....	12	Isaïe Boudreau.....	Riv. Bourgeois..	3	33 90
111903	Stella.....	Arichat.....	14	Camil Bouchie, sr. ...	"	3	35 90
103461	St. Lidwina..	"	11	Benj. Pottie	L'Ardoise.....	4	40 20
111902	St. Thomas	"	10	Thomas Pottie.....	Rockdale.	3	31 90
92599	Thistle.....	Sydney.....	11	Maurice Boudreau ..	Riv. Bourgeois..	4	40 20
103460	Two Brothers.....	Arichat.....	18	Geo. Peters	L'Ardoise	5	54 50
100575	Tyler.....	"	54	Chas. Boudreau.....	Riv. Bourgeois..	14	156 20
71034	Vanguard	"	51	Thos. Boudrot.....	Petit de Grat....	8	109 40
38523	Victoria.....	"	24	Henry Burke	St. Peters.....	7	75 10

SESSIONAL PAPER No. 22

LIST of Vessels which received Fishing Bounty, &c.—Nova Scotia—*Con.*SHELBURNE COUNTY—*Concluded.*

Official Number.	Name of Vessel.	Port of Registry.	Tonnage.	Name of Owner or Managing Owner.	Residence.	No. of Crew paid.	Amount of Bounty paid.	
							\$	cts.
94632	A. C. Greenwood ..	Shelburne	15	Thomas D. Goodick...	Sandy Point....	8	73	40
103793	Agatha.....	"	92	John H. Thorbourn...	"	22	240	60
100617	Altona	"	28	Wm. McMillan.....	Lockeport.....	9	93	70
100612	Ardella.....	"	10	Eleazar Crowe.....	Sandy Point....	4	39	20
100813	Blanche.....	Barrington.....	24	Wm. Kenney.....	Doctor's Cove...	4	53	20
103186	Britannia.....	Shelburne	11	Ross Enslow	W. Green H'br.	5	47	50
103051	Carrie May.....	Yarmouth	25	Wm. Wickens	Shag Harbour...	5	61	50
96970	Charlie Richardson.	Shelburne	26	John B. Harding, jr..	Lockeport.....	7	77	10
94942	Coronilla.....	"	28	Fred. Greenwood....	Shag Harbour...	7	79	10
107058	Defender.....	Barrington.....	20	Archibald Madden....	Baccaro.....	7	71	10
107057	Dolly Varden.....	"	10	Freeman Atwood.....	Atwood's Brook	3	31	90
103053	Eddie C.....	Yarmouth.....	11	Harry Greenwood....	Shag Harbour...	4	40	20
77603	Eldon C.	Barrington.....	27	Josiah Thomas.	Cape Negro.....	10	100	00
103795	Etta Vaughn	Shelburne	98	Bradford P. Thorbourn	Sandy Point....	20	226	60
107054	Favorite.....	Barrington.....	28	Wm. O. Hopkins	Doctor's Cove...	9	93	70
85476	Fleetwing.....	Shelburne	15	Wm. McMillan.....	Lockeport.....	5	51	50
107350	Forrester	"	23	James E. Pennington.	Sandy Point....	6	66	80
111872	Gertrude L.....	Yarmouth	99	Enos Churchill.	Lockeport.....	23	247	90
112138	Gladiator.....	Shelburne	11	Geo. R. Enslow.....	McNatt's Island	2	25	60
111683	Greenwood.....	"	71	Edw'd P. Greenwood	N. E. Harbour..	19	209	70
90647	Hattie Emeline...	Yarmouth	11	Chas. A. Reynolds ...	Up.Port LaTour.	4	40	20
80799	Hattie T.....	Barrington.....	16	Wm. Atwood.....	Atwood's Brook	4	45	20
111687	Ida M. Clarke....	Shelburne	99	Wm. McMillan.....	Lockeport.....	24	255	20
85766	J. Lyons	Barrington.....	17	David S. Slate	Cape Negro	6	60	80
111684	Julian H. Archer..	Shelburne	99	Churchill Locke.....	Lockeport.....	18	211	40
73967	Katie.....	Liverpool	14	James Eisenhauer....	Ragged Island..	5	50	50
107981	Kestrel.....	Shelburne	99	Geo. A. Cox.....	Shelburne	18	211	40
94438	Lark.....	Barrington.....	13	Thos. Ross.....	Up. Port LaTour	6	56	80
100329	La Rose.....	Yarmouth.....	13	Noah Abbott.....	Forbes Point...	3	34	90
94661	L. C. Tough.....	Shelburne	12	Edgar H. Swaine.....	Blanche.....	5	48	50
112134	Louise T. Churchill.	"	50	Enos Churchill.....	Lockeport.....	14	152	20
103796	Mabel Denvers ..	"	14	D. T. Horton.....	Up.Port LaTour	6	57	80
112136	Maple Leaf.....	"	48	Hugh McAlpine.....	Lockeport.....	13	142	90
103712	Marguerite.....	Yarmouth.....	10	Frank H. Nickerson..	Forbes Point...	4	39	20
83493	Mary C.....	Liverpool	80	John A. Harding.....	Osborne.....	7	131	10
83434	Mary May.....	Shelburne	20	Adam J. Firth.....	Shelburne	4	49	20
112135	Mattie	"	90	John A. McGowan....	"	19	218	70
103057	Mayflower	Yarmouth.....	12	Chas. N. Smith.....	Port Saxon.....	5	48	50
103177	Mayflower	Shelburne	12	Adam B. Hamilton....	Carleton Village	3	33	90
111700	Miriam F.	Liverpool	11	Smith C. Craig.....	E. Sable River	4	40	20
107985	Muriel.....	Shelburne	25	Edmund Locke.....	Lockeport.....	6	68	80
100606	Myra Louise	Barrington.....	17	Fred. C. McLean....	Port Saxon.....	6	60	80
103175	Myrtle	Shelburne	10	Wm. Wolfe.....	Big Pt Le Herb't	4	39	20
103800	Nellie I. King....	"	99	Geo. H. King.....	Sandy Point....	21	233	30
107059	Reginald R.....	Barrington.....	16	Thos. E. Worthen ..	Barrington.....	4	45	20
107334	Shamrock.....	Yarmouth.....	17	David Watkins.....	Atwood's Brook	3	38	90
112137	Shamrock.....	Shelburne	37	Austin Swansburg ...	Little Harbour ..	9	102	70
90648	Stranger	Barrington.....	20	Ira P. Brown.....	Stoney Island ..	7	71	20
107990	Ter'nee C. Lockwood	Shelburne	99	Wm. McMillan.....	Lockeport.....	22	240	60
90893	Thomas H.....	Yarmouth.....	13	F. T. Nickerson	Clark's Harbour		13	00
96961	Tivoli.....	Shelburne	24	Wm. J. Doane.....	Red Head.....	6	67	80
77744	Whip-poor-Will. ..	"	17	Geo. T. Littlewood..	Ingomar.....	6	60	80
103183	Wren.....	"	22	Avard P. Hamilton...	Carleton Village	8	80	40
75722	Yuba.....	Yarmouth.....	15	Foster Salisbury.....	Pt. La Tour....	6	58	80

LIST of Vessels which received Fishing Bounty, &c.—Nova Scotia—*Con.*

VICTORIA COUNTY.

Official Number.	Name of Vessel.	Port of Registry.	Tonnage.	Name of Owner or Managing Owner.	Residence.	No. of Crew paid.	Amount of Bounty paid.	
							\$	cts.
112388	Annie Amelia	Sydney	13	Matthew Hawley.....	South Ingonish.	5	49	50
112384	Columbia	"	10	David C. Williams.....	"	6	53	80
75571	Fanny.....	Liverpool	16	Patk. J. Kelly.....	"	6	59	80
107371	Highland Lass.....	Sydney	19	Wm. Donovan.....	"	8	77	40
107379	Maggie	"	11	Chas. Williams.....	"	5	47	50
112387	Mary A. Dunphy..	"	18	Mary A. Dunphy.....	"	6	61	80
107355	Mary E.....	"	10	Allan McIntyre.....	Ingonish Ferry	5	46	50
107375	Minnie B.....	"	10	James Brewer	South Ingonish.	5	46	50
112386	Shanrock	"	11	Angus McDonald.....	"	5	47	50
100444	Stella May	Canso	12	Joshua H. Ford.....	"	3	33	90

YARMOUTH COUNTY.

111879	Annie B.....	Yarmouth	20	Théodore D'Entremont	W. Pubnico.....	7	71	10
94980	Aurore	"	86	Dennis A. D'Entremont	"	20	226	00
103187	Ben Bolt.....	"	91	A. F. Stoneman & Co.	Yarmouth.....	22	240	60
107053	Bonnie Lin.....	"	10	Edgar Landers.....	Sandford.....	1	17	30
107346	Caddie	"	10	James E. Perry.....	Pt. Maitland	4	39	20
111836	Chevalier.....	Digby.....	11	Warren S. Sollows.....	"	4	40	20
111871	Coronation	Yarmouth	98	A. F. Stoneman & Co.	Yarmouth.....	19	218	70
100605	Dawn.....	Barrington	49	Henry A. Amiro.....	W. Pubnico.....	16	165	80
116205	Eddie James	Yarmouth.....	79	"	"	18	210	40
112280	Edith L.....	Digby.....	26	James Adams.....	Pt. Maitland	5	62	50
107332	Estelle	Yarmouth.....	15	Stillman Smith	Lower Argyle..	6	58	80
100535	Fair Play.....	"	11	Luke Holmes.....	Yarmouth.....	2	25	60
94972	Florence.....	"	19	Frank Harris.....	Sandford.....	4	48	20
112282	Florence H.....	Digby	20	Riley Haskell.....	Pt. Maitland	4	49	20
116207	Gabriel A.....	Yarmouth.....	17	Theophilus Jacquard.	Comeau's Hill	4	46	20
111876	Geneva May.....	"	72	Leander Amiro.....	E. Pubnico.....	20	218	00
90885	Georgiana.....	"	90	Henry Lewis	Yarmouth.....	20	226	00
80643	Hazel Dell.....	"	87	E. F. Parker	"	21	233	30
103717	Henry L.....	"	10	Arc'ge C. D'Entremont	W. Pubnico.	4	39	20
116204	Laurie J.....	"	65	Julien D'Entremont...	"	19	203	70
59388	Letitia	"	10	David Smith.....	Kelleys' Cove...	4	39	20
103709	Lizzie E.....	"	19	Juston Ellis	Pt. Maitland...	4	48	20
80614	Louise.....	"	85	J. H. Porter & Co	Tusket Wedge...	18	211	40
103718	Lucy	"	10	Ambroise D'Entremont	W. Pubnico .....	...	10	00
107605	Mabel M.	"	20	Jesse Ellis.....	Sandford	3	41	90
88596	M. A. Louis.....	"	64	A. F. Stoneman & Co.	Yarmouth.....	19	202	70
107337	Marguerite.....	"	57	Louis P. D'Entremont.	W. Pubnico	16	173	80
111523	Mildred P.....	Digby.....	11	James W. Haskell ...	Pt. Maitland...	2	25	60
111875	Nelson A.....	Yarmouth.....	72	Henry A. Amiro.....	W. Pubnico	17	196	10
103706	Regine	"	10	Téles. D'Entremont...	"	3	31	90
111521	Retta E.....	Digby	10	Calvin Sollows.....	Pt. Maitland	4	39	20
83254	Sea Foam	Annapolis	28	Leander Amiro.....	E. Pubnico.....	7	79	10
75724	Sea Foam	Yarmouth.....	75	J. H. Porter & Co	Tusket Wedge...	18	206	40
100323	Senora	"	85	Mark A. Surette	W. Pubnico.....	22	240	60
100313	Souvenir	"	71	Syl. D. D'Entremont..	"	20	217	00
103716	Valkyrie	"	11	Ernest S. Hines.....	Argyle Sound...	4	40	20
103711	Venite	Digby	24	Edison Ellis.....	Pt. Maitland	7	75	10
116202	Whynot.....	Yarmouth.....	10	Wm. R. Landers.....	"	4	39	20

SESSIONAL PAPER No. 22

List of Vessels which received Fishing Bounty, &c.—New Brunswick—*Con.*

CHARLOTTE COUNTY.

Official Number.	Name of Vessel.	Port of Registry.	Tonnage.	Name of Owner or Managing Owner.	Residence.	No. of Crew paid.	Amount of Bounty paid.	
							\$	cts.
107807	America	St. John.	16	Joseph Morehouse....	White Head....	5	52	50
107913	Arnold B.....	St. Andrews ..	10	Henry H. Cheney.....	"	3	31	90
107603	Augusta Evelyn....	St. John.	31	James Scovil.....	Flagg's Cove....	7	82	10
107903	Ava M.....	St. Andrews....	17	George A. Johnson....	WoodwardsCove	1	24	30
103127	Avis C. Toby ...	"	13	C. B. Harvey.....	Flagg's Cove....	1	20	30
103128	Britannia.....	"	22	L. C. Ingalls.....	Grand Harbour.	5	58	50
107905	Centennial	"	16	John F. Morse.....	Seal Cove.	3	37	90
107304	Clara A. Benner...	"	37	Simon Brown.....	Wilson's Beach..	5	73	50
103114	Edward Morse.....	"	32	Alex. Calder, jr.....	Campobello.....	7	83	10
111522	Elizabeth	Digby.....	21	Frank L. Benson.....	Seal Cove.	4	50	20
80882	Ella Mabel.....	St. Andrews....	14	Eldorado Lee.....	Beaver Hbr.....	3	35	90
111513	Ena & Elsie.	St. John.....	13	Frank Lakeman	Wo'dward'sCove	2	27	60
83202	Enchantress....	St. Andrews ..	10	Peter Dixon.....	North Head....	4	39	20
80803	Exenia.....	Windsor.....	18	John Barry.....	Beaver Head....	5	54	50
88276	Falcon.....	St. Andrews....	12	John Cronk.....	Flagg's Cove...	5	48	50
92511	Fleet Wing	"	11	Aldin McFarland.	"	3	32	90
107906	Flora.....	"	14	Grant L. Dakin.....	Seal Cove.....	2	28	60
111552	Flora B.....	"	13	Nelson Ingersoll.....	WoodwardsCove	3	34	90
107432	Golden Rule.....	"	49	Cnas. Newman et al...	Wilson's Beach..	9	114	70
107910	Grace & Ethel.....	"	16	Robt. Ingersoll.....	Wo'dwar'sCove	5	52	50
94839	Harrie.....	"	14	Wm. J. Tucker.....	Back Bay.....	3	35	90
111839	Harry C	Digby.....	16	Thomas Bright.	Seeley's Cove....	1	23	30
107437	Hattie L.....	St. Andrews ..	12	Edward Benson.	Seal Cove.....	2	26	60
83463	Havelock.....	"	33	Wm. James.....	Wilson's Beach..	3	54	90
103119	Hortense.....	"	15	Wm. J. Morse.....	White Head....	5	51	50
103907	Jessie James.	"	11	Josephine Frankland.	"	4	40	20
77766	Laconic.....	Shelburne	15	John Dixon.....	Flagg's Cove....	2	29	60
88273	Lillian E.....	St. Andrews....	13	Sanford Dakin.....	Beaver Hbr.....	3	34	90
88407	Linnet.....	Digby.....	15	Owen Morse.....	Seal Cove.....	5	51	50
59321	Little Nell.....	St. Andrews....	21	Wm. McLellan.....	Welchpool.....	2	35	60
92514	Maggie Jane.....	"	10	Alex. McNicol.....	Letete	4	39	20
111558	Majestic.....	"	12	Wm. Flewelling	Flag's Cove....	1	19	30
107912	Mary & Hilda.....	"	17	Sdney H. Guptill....	White Head.	4	46	20
107912	Mary & Hilda*....	"	17	Wilmott Guptill....	Grand Hbr.....	3	38	75
103184	Mayflower.....	Shelburne	26	Calvados Brown.	Wilson's Beach..	6	69	80
107802	Meteor.....	St. John.....	13	Sylvester R. Watt....	Flagg's Cove....	4	42	20
107438	Minnie F	St. Andrews....	11	Chester Frankland....	White Head....	4	40	20
85442	Mystery.....	"	14	John R. Moses.....	Flagg's Cove....	4	43	20
107920	Nellie L.....	"	17	Austin Levy.....	Grand Hbr.....	3	38	90
92518	Peril.....	"	18	Martin Eldridge.....	Beaver Hbr.....	4	47	20
103993	Pythian Knight....	"	19	Frank Ingersoll.	Flagg's Cove....	4	48	20
107904	Quoddy Queen.....	"	13	Hantford Small jr....	White Head....	4	42	20
107806	Rena F.....	St. John.....	12	John Ingersoll.....	Wo'dward'sCove	5	48	50
83253	Rescue.....	Annapolis	17	Blan Fletcher et al....	Wilson's Beach..	3	38	90
75591	Rise & Go.....	St. Andrews....	16	Walter Sirles.....	"	3	37	90
111556	She Said No.....	"	11	Geo. A. Johnson.....	Wo'dward'sCove	3	32	90
107433	Sir John.....	"	11	Hiram Morse.....	White Head....	3	32	90
59387	Telephone.....	"	19	James Brown.....	Wilson's Beach..	3	40	90
107440	Three Links.....	"	12	Robt. A. Main.....	Wo'dward'sCove	5	48	50
111555	Valkyrie.....	"	16	Lorenzo C. Watt.....	Flagg's Cove....	3	37	90
88282	Veritas.....	"	10	Geo. Lasley.....	Back Bay.	3	31	90
103125	Virgin Queen.	"	16	Nelson Morse.....	Seal Cove.....	4	45	20
77969	Wave Queen.	"	11	Judson Foster.....	Grand Hbr.....	4	40	20
97149	Winnie.....	"	12	Henry Holland.....	Seeley's Cove ..	2	26	60
107917	Zelma.....	"	17	Henry Frankland....	White Head....	4	46	20

* For 1902.

List of Vessels which received Fishing Bounty, &c.—New Brunswick—*Con.*

GLOUCESTER COUNTY.

Official Number.	Name of Vessel.	Port of Registry.	Tonnage.	Name of Owner of Managing Owner.	Residence.	No. of Crew paid.	Amount of Bounty paid.	
							\$	cts.
72099	Adelina.....	Chatham.....	12	Clement Lanteigne....	Lameque.....	4	41	20
103009	Adeline Gladys ...	"	12	Pat'k D. Blanchard....	Caraquet.....	4	41	20
103081	Albatross.....	"	13	Thomas Ahier.....	Shippegan.....	4	42	20
112156	Albert W.....	"	10	Joseph H. Savoy.....	Lameque.....	4	39	20
100984	Alice	"	11	Robt Young.....	Caraquet.....	3	32	90
103279	Alice Maud....	"	10	C. Robin, Collas & Co.	"	3	31	90
97194	Alika.....	"	12	Lange Paulin.....	Lameque.....	4	41	20
112162	Alma.....	"	12	Agapit Duguay.....	"	4	41	20
103763	Alouette.	"	10	Thomas Ahier ...	Shippegan.....	3	31	90
92419	Anna.....	"	12	Dosithé Chiasson.....	Lameque.....	4	41	20
100960	Annie M.....	"	11	W. S. Loggie Co Ltd.	Chatham.....	4	40	20
96739	Argeline	"	14	Octave Paulin.....	Caraquet.....	4	43	20
103085	Argentina.....	"	12	C. Robin, Collas & Co.	"	3	33	90
85694	Arrow	"	14	Joseph A. Doiron.....	"	5	50	50
100983	Bee.	"	11	C. Robin, Collas & Co.	"	3	32	90
61431	Bee.	"	11	Paul Noël.....	Lameque..	4	40	20
103072	Ben Hur.	"	11	John Leclerc.....	Caraquet.....	5	47	50
72079	Betsy.....	"	13	Wm. Fruing & Co....	"	4	42	20
100975	Big Bear.....	"	10	Robt Young.....	"	3	31	90
100299	Blanchard.	"	12	C. Robin, Collas & Co.	"	3	33	90
103589	Blenheim.....	"	13	"	"	4	42	20
103780	Britannia.....	"	13	Wm. Fruing & Co....	"	4	42	20
100780	Britannic.....	"	12	C Hubbard.....	"	3	33	90
100988	Caesar.....	"	10	Philip Rive.....	"	3	31	90
100774	Calliope.....	"	12	"	"	3	33	90
103271	Celia.. ..	"	11	Dominique Gallien....	"	4	40	20
103585	Cerdric.....	"	14	Philip Rive.	"	3	35	90
100784	Charlotte	"	13	Robt Young.....	"	3	34	90
100789	Chazalie.....	"	11	"	"	3	32	90
96730	Christina	"	11	C. Robin, Collas & Co.	"	4	40	20
101000	Condor.....	"	10	Thos. Ahier.....	Shippegan.....	4	39	20
203083	Corsair.....	"	10	"	"	3	31	90
111465	C. R. C.....	"	13	C. Robin, Collas & Co.	Caraquet.....	4	42	20
100916	Cygnets.....	"	12	"	"	4	41	20
100971	Cyprian... ..	"	10	Elie Sivret.....	"	5	46	50
100913	Daffodil.....	"	10	Thos. Ahier.....	Shippegan.....	3	31	90
100915	Dawn.	"	12	C. Robin, Collas & Co.	Caraquet.....	4	41	20
103076	Dipper.....	"	12	W. S. Loggie Co Ltd..	Chatham.....	4	41	20
103948	Dora.....	"	12	C. Robin, Collas & Co.	Caraquet..	2	26	60
112155	Dora.....	"	10	Seraphin Doiron.....	Miscou Hbr.....	2	24	60
100999	Dove.....	"	11	Thomas Ahier.....	Shippegan.....	3	32	90
100998	Eagle.....	"	10	"	"	4	39	20
100293	Eliza.....	"	15	Robert Young.....	Caraquet..	4	44	20
103590	Eliza.....	"	13	C. Robin, Collas & Co.	"	4	42	20
96737	Elmina	"	11	Jacques Noël.....	Lameque..	4	40	20
100911	Emperor.....	"	10	Thos. Ahier.....	Shippegan.....	3	31	90
100786	Empress.....	"	12	Robt Young.....	Caraquet..	3	33	90
103776	Esk	"	14	"	"	3	35	90
100772	Estelle.....	"	13	Philip Rive.....	"	3	33	90
100787	Ethel.....	"	11	Robt Young.....	"	3	32	90
100905	Evangeline.....	"	10	Pierre A. Lanteigne...	"	4	39	20
92417	Evangeline.....	"	11	Philippe Luce.....	Little Shippegan	4	40	20
103001	Falcon.....	"	10	Thos. Ahier.....	Shippegan.....	4	39	20
103077	Fame.....	"	10	Geo. D. Mallet.....	"	4	39	20
100298	Fisher.....	"	12	Elie Chiasson.....	Little Lameque.	2	26	60
61445	Flavie.....	"	13	Wm Fruing & Co.	Caraquet.....	5	49	50
111468	Fleetwing.....	"	14	"	"	4	43	20
61405	Fly.	"	11	Alex'r McLauchlin....	Tracadie.....	3	32	90
112165	Flying Cloud..	"	13	John F. Robichaud....	Shippegan.....	5	49	50
100782	Flying Foam.....	"	12	Robt Young.....	Caraquet.....	3	33	90

SESSIONAL PAPER No. 22

LIST of Vessels which received Fishing Bounty, &c.—New Brunswick—*Con.*
GLOUCESTER COUNTY—*Continued.*

Official Number.	Name of Vessel.	Port of Registry.	Tonnage.	Name of Owner or Managing Owner.	Residence.	No. of Crew paid.	Amount of Bounty paid. \$ cts.
112151	Flying Foam	Chatham	18	C. Robin, Collas & Co.	Caraquet..	3	39 90
100912	Foam	"	10	Joseph Z. Chiasson	"	4	39 20
111467	Four Brothers	"	13	Prosper S. Albert	"	4	12 20
100778	Gambetta	"	13	C. Hubbard	"	3	34 90
100954	Gazelle	"	10	"	"	3	31 90
111464	"	"	13	C. Robin Collas & Co.	"	4	41 20
100968	Gem	"	11	"	"	4	40 20
103766	Genesta	"	12	Theotime Poirier	"	3	33 90
103282	Gilknockie	"	11	Robt. Young	"	2	25 60
103086	Gipsy	"	20	W. S. Loggie & Co.	Chatham.	5	56 50
111848	Gipsy	"	15	Wm. Fruing & Co.	Caraquet.	4	44 20
100964	Gladstone	"	10	Isaïe Lanteigne	"	3	31 90
100910	Gleaner	"	13	Luc Lanteigne	"	5	49 50
107775	Gold Seeker	"	13	C. Robin Collas & Co.	"	4	42 20
112157	Grasshopper	"	16	Philip Rive	"	4	45 20
92418	Grip	"	12	Gervais Chenard	"	4	41 20
100790	Guiding Star	"	11	Robt. Young	"	3	32 90
111849	Happy Home	"	16	H. LeBouthillier Jr.	"	4	45 20
100956	Harold N.	"	12	W. S. Loggie Co.	Chatham.	4	41 20
100994	Hercules	"	10	Pierre M. Lanteigne	Caraquet.	3	31 90
107771	Heron	"	13	Wm. Fruing & Co.	"	4	42 20
103765	Hirondelle	"	11	Thos. Ahier	Shippegan	3	32 90
61425	Hope	"	13	Theotime Lanteigne	Caraquet.	4	42 20
100903	Hope	"	12	Robt. Young	"	3	33 90
103939	"	"	11	Chas. Resle	Lameque.	5	47 50
100906	Hotspur	"	10	Philip Rive	Caraquet.	4	39 20
103931	Irene	"	12	Wm. Fruing & Co.	"	4	41 20
96724	Isabel	"	10	"	"	4	39 20
103289	Jersey Lily	"	12	Thos. Ahier	Shippegan	3	33 90
100953	John B.	"	11	W. S. Loggie Co.	Chatham.	4	40 20
100965	Josephine	"	11	Philip Rive	Caraquet.	4	40 20
111466	King Edward	"	14	James X. Lanteigne	"	5	50 50
103949	King Fisher	"	13	Wm. Fruing & Co.	"	4	42 20
100981	Kite	"	11	André D. Gionet	"	4	40 20
103288	"	"	10	Thos. Ahier	Shippegan	2	24 60
107774	Klondyke	"	14	C. Robin, Collas & Co.	Caraquet.	5	50 50
103283	Koh-i-noor	"	13	Philip Rive	"	5	49 50
111461	Ladysmith	"	17	Hippolite Chiasson	Little Lameque	4	46 50
103003	Lark	"	10	Thos. Ahier	Shippegan	3	31 90
107773	L'Etoile	"	15	Prudent Gallien	Caraquet.	4	44 20
112152	Lillian	"	15	C. Robin Collas & Co.	"	4	44 20
100972	Lizzie D.	"	11	Robt. Young	"	3	32 90
88664	"	"	17	James Davidson	Tracadie	1	24 30
100902	Lord Stanley	"	10	Wm. Fruing & Co.	Caraquet.	4	39 20
100980	Lynx	"	11	C. Robin Collas & Co.	"	4	40 20
112154	Mac	"	11	John McWard	Miscou	5	47 50
100955	Majestic	"	10	C. Hubbard	Caraquet.	4	39 20
112158	Maple Leaf	"	13	Wm. Fruing & Co.	"	4	42 20
112163	Margaret Ann	"	13	John Jones	Little Lameque	4	42 20
107779	Marie	"	15	Gaspard Savoy	Shippegan	4	44 20
72100	"	"	11	Onesime Chiasson	Lameque	4	40 20
103278	Marie Celia	"	13	Joseph N. LeBouthillier	Caraquet.	5	49 50
100292	Marie Joseph	"	12	Lazare Gauvin	Little Lameque	4	41 20
100295	Marie Louisa	"	18	Joseph A. Paulin	Caraquet.	4	47 20
111847	Mary	"	14	David Albert	"	4	43 20
103084	Mary Emma	"	11	Wm. Fruing & Co.	"	3	32 90
92413	Mary Jane	"	14	John B. Bizzo	Miscou Hbr.	4	43 20
100781	Mary Louise	"	11	C. Hubbard	Caraquet	3	32 90
100957	Mary R.	"	12	W. S. Loggie Co.	Chatham.	5	48 50
112161	Mary Star	"	15	Hyac. LeBouthillier Sr.	Caraquet.	5	51 50
112150	Mary Star of the Sea	"	15	Luke Friolet	Caraquet.	5	51 50
111844	Mary Star of the Sea	"	14	J. N. LeBouthillier	"	4	43 20
103088	Max	"	10	Maxime Cormier	Lower Caraquet.	4	39 20
103768	Mayflower	"	13	C. Robin, Collas & Co.	Caraquet.	3	34 90
111462	Mayflower	"	10	Harrison Kent	Miscou Hbr.	1	17 30
107777	May Flower	"	11	Octave Benoit	Little Lameque	4	40 20

List of Vessels which received Fishing Bounty, &c.—New Brunswick—*Con.*GLOUCESTER COUNTY—*Con.*

Official Number.	Name of Vessel.	Port of Registry.	Tonnage.	Name of Owner. or Managing Owner.	Residence.	Number of Crew paid.	Amount of Bounty paid.
61447	Merida	Chatham	13	Joseph F. Duguay	Shippegan	4	42 20
100779	Mermaid	"	11	C. Hubbard	Caraquet	4	40 20
112164	Merry Christmas	"	13	Célestin Jean	Little Lameque	4	42 20
100300	Mikado	"	13	C. Robin, Collas & Co.	Caraquet	4	42 20
88669	Morning Star	"	12	Gustave Gionet	St. Rose	2	26 60
103005	Osprey	"	10	Thomas Ahier	Shippegan	3	30 90
100297	Palma	"	14	Olivier Duguay	Lameque	5	50 50
100776	Patrick	"	11	Philip Rive	Caraquet	4	40 20
103778	Pelican	"	13	Wm. Fruing & Co.	"	4	42 20
103764	Petrel	"	12	Thos. Ahier	Shippegan	4	41 20
61399	Phantom	"	17	F. X. Ozanne	"	4	46 20
96740	Providence	"	13	J. N. LeBouthillier	Caraquet	4	42 20
96732	Providence	"	11	Wm. Fruing & Co.	"	4	40 20
72076	Providence	"	12	Thos. Ahier	Shippegan	4	41 20
100904	P. T. S.	"	11	J. N. LeBouthillier	Caraquet	4	40 20
100775	Red Gauntlet	"	11	Philip Rive	"	3	32 90
103586	Remus	"	17	W. S. Loggie Co.	Chatham	3	38 90
100952	Replevin	"	10	C. Robin, Collas & Co.	Caraquet	3	31 90
103078	Reward	"	13	James DeGrace	Shippegan	4	42 20
97191	Rita	"	12	C. Robin, Collas & Co.	Caraquet	3	33 90
111470	River Branch	"	11	Wm. Fruing & Co.	"	4	40 20
103946	Robin	"	12	C. Robin, Collas & Co.	"	4	41 20
103587	Romulus	"	18	W. S. Loggie Co.	"	4	47 20
92404	Rosa	"	17	Fabien Aché	Lameque	4	46 20
100908	Rosalie	"	10	Edw. O. LeBouthillier	Caraquet	3	31 90
100773	Rupert	"	12	Philip Rive	"	3	33 90
100907	Sarah	"	10	Robert Young	"	5	46 50
92408	Sarah A. W.	"	15	Fidèle Roussel	Shippegan	5	51 50
103010	Sarah B.	"	10	J. N. E. Lanteigne	Caraquet	5	46 50
103584	Saxon	"	13	Philip Rive	"	3	34 90
100959	Sea Bird	"	10	W. S. Loggie Co.	Chatham	4	39 20
100901	Sea Flower	"	12	Robt. Young	Caraquet	4	41 20
100914	Sea Flower	"	11	C. Robin, Collas & Co.	"	4	40 20
96926	Sea Foam	"	15	Michel Lanteigne	"	4	44 20
96731	Sea Star	"	13	Joseph M. Savoy	Shippegan	4	42 20
100961	Silver Moon	"	14	W. S. Loggie Co.	Chatham	4	43 20
100788	Sir Charles	"	11	Robt. Young	Caraquet	4	40 20
100963	Stanley	"	10	Philip Rive	"	3	31 90
103087	Stanley	"	10	Joseph A. Baudin	Miscou Harbour	4	39 20
103193	Startle	"	11	Alfred J. Gauvin	Caraquet	3	32 90
103767	Stella Maris	"	19	J. N. LeBouthillier	"	5	55 50
111469	St. John	"	13	Jean Aché	Lameque	4	42 20
112167	St. Joseph	"	10	Raphael Gionet	Caraquet	4	39 20
103008	St. Joseph	"	12	Adolphe Aché	Lameque	4	41 20
107776	St. Peter	"	12	"	"	4	41 20
103826	Superbe	Paspebiac	12	J. Bte. E. Roy	Petit Rocher	3	33 90
111845	Superior	Chatham	14	J. N. E. LeBouthillier	Caraquet	4	43 20
103772	Surprise	"	10	Thos. Blanchard	Mizzonette	3	31 90
103947	Swallow	"	13	C. Robin, Collas & Co.	Caraquet	4	42 20
103006	Swallow	"	11	Thos. Ahier	Shippegan	4	40 20
103762	Swan	"	14	"	"	4	43 20
100986	Swift	"	11	Augustin Lanteigne	Island River	4	40 20
103761	Swing	"	11	Jérémie Léger	Caraquet	3	32 90
100777	Teutonic	"	11	C. Hubbard	"	3	32 90
96738	Three Brothers	"	12	John Albert	"	4	41 20
103082	Thrush	"	10	Wm. Mallet	Shippegan	4	39 20
100918	Tickler	"	12	C. Robin, Collas & Co.	Caraquet	4	41 20
103583	Two Brothers	"	11	W. S. Loggie Co.	Chatham	4	40 20
112159	United Empire	"	17	Robert Young	Caraquet	4	46 20
103285	Valkyrie	"	12	Philip Rive	"	4	41 20
103274	Vesuvius	"	10	Phileas Mallet	Shippegan	5	46 50
103775	Victoria	"	16	W. S. Loggie Co.	Chatham	5	52 50
100995	Voltaire	"	10	Philip Rive	Caraquet	3	31 90
100966	Von Moltke	"	11	"	"	3	32 90

SESSIONAL PAPER No. 22

LIST of Vessels which received Fishing Bounty, &c.—New Brunswick—*Con.*

GLOUCESTER COUNTY—*Concluded.*

Official Number.	Name of Vessel.	Port of Registry,	Tonnage.	Name of Owner or Managing Owner.	Residence.	No. of Crew paid.	Amount of Bounty paid. \$ cts.
103588	Vulture.	Chatham.....	13	W. S. Loggie Co.....	Chatham.....	4	42 20
96735	White Fish	"	12	Joseph L. Savoy.....	Lameque.....	4	41 20
100953	White Wings.....	"	10	Robert Young.....	Caraquet.....	3	31 90
100973	Worlds Fair.....	"	11	"	"	2	25 60
103079	Wren..	"	11	Thos. Ahier.....	Shippegan.....	3	32 90
100920	Zephyr.....	"	12	C. Robin, Collas & Co.	Caraquet.....	3	33 90

NORTHUMBERLAND COUNTY.

96725	Bessie T.....	Chatham.....	10	Donald Loggie.....	Church Point. .	3	31 90
100969	John Bull.	"	10	James Anderson....	"	4	39 20
92420	Mary Louise.	"	13	Donald Loggie.....	"	3	34 90

RESTIGOUCHE COUNTY.

103779	Ibis.	Chatham.. ...	11	André Arseneau.....	Dalhousie.	4	40 20
94959	Winnie G. S.....	Lunenburg	26	Donald McGregor....	"	4	55 20

ST. JOHN COUNTY.

88253	E. B. Colwell.....	St. John.....	19	Wm. McAllister	Pisarinco.	5	55 50
100156	Hustler.....	"	44	Addison Thompson...	Dipper Harbour.	4	73 20
77783	Lost Heir.	"	15	Richard Maguire.....	Pisarinco.....	2	29 60

PROVINCE OF PRINCE EDWARD ISLAND.

KINGS COUNTY.

103604	A. H. Hardy ..	Sydney.....	45	John Dicks.....	Georgetown	5	81 50
71310	Black Watch	Charlottetown..	23	John Rafuse.....	"	4	52 20
100445	Carrie O.	Canso	12	Edward Colbert.	Murray Hbr. Sth	3	33 90
116294	Charlotte S.....	Charlottetown..	14	Reuben W. Penny....	"	3	35 90
75904	Empress.....	"	26	John Gosbee.....	"	6	69 80
83196	Ethel Blanche....	Pictou.....	17	Michael Poole	Souris.....	4	46 20
100691	Frances E. Willard.	"	23	Louis H. Herring.	Murray Hbr. Sth	6	66 80
107759	Hustler.	Charlottetown..	13	Hugh Jackson.....	"	5	49 50
75566	Julia A.....	"	15	Gabriel Billard.....	"	5	51 50
94670	Katie A. Burns....	Halifax.....	36	Joseph White.....	"	9	101 70
38516	Lady of the Lake..	Arichat.....	26	Shadrack Johnstone..	Gaspereaux.....	5	62 50
100696	Marion Emerson...	Pictou.....	30	Reuben Cohoon.....	Murray Hbr. Sth	7	81 10
107757	Mayflower.....	Charlottetown..	18	Josias Baker.....	Bristol	6	61 80
90206	Minnie Mack...	"	15	Wm. Poole.....	Souris.....	3	36 90
85652	Our Hope.	"	36	Edward Dicks.....	Georgetown....	5	72 50
64869	Sarah L. Oxner...	Halifax.....	34	Edward Delorie.	"	5	70 50
74160	Seabird..	Charlottetown..	20	Chas. Gillam.....	Souris.....	3	41 90
107189	Sea Pearl.....	"	11	A. L. Jackson	Gaspereaux.....	4	40 20
107770	Success..	"	15	Robt. McKenzie.....	Cable Head W'st	4	44 20
90488	Wave.	"	19	James Delorie.....	Georgetown	3	40 90
116292	Wilena Fraser.	"	13	John Mckenzie.....	Murray Hbr. Sth	4	42 20
103865	William R.....	Halifax.....	43	Henry Dicks..	Georgetown	7	94 10

LIST of Vessels which received Fishing Bounty, for the Year 1903—*Con.*

PRINCE COUNTY.

Official Number.	Name of Vessel.	Port of Registry.	Tonnage.	Name of Owner or Managing Owner.	Residence.	No. of Crew paid.	Amount of Bounty paid.	
							\$	cts.
107758	Daisy.....	Charlottetown..	13	Daniel Fraser.....	Alberton.....	4	42	20
90855	Delta.....	".....	25	James L. Richards....	".....	1	32	30
103771	J. Amy.....	Chatham.....	12	Leon Perry.....	St. Louis.....	5	48	50
111850	Johnnie M.....	".....	12	John T. Murphy.....	Campbellton....	4	41	20
92473	Lucy Louise.....	Charlottetown..	19	James Roach.....	Malpeque.....	5	55	50
103592	Rosamond.....	".....	18	David O. Champion...	Baltic.....	3	39	90
94992	Sarah P. Ayer.....	".....	64	John Champion.....	Alberton.....	10	137	00
107760	Western Prince....	".....	10	Wallace Richards....	".....	5	46	50

QUEEN'S COUNTY.

107763	Guinea.....	Charlottetown..	10	Boyce Harding.....	French River...	4	39	20
100580	Maggie E. C....	Lunenburg.....	20	Wm. Cole.....	".....	4	49	20
100474	R. Beatrice.....	".....	19	Jonathan Delaney...	".....	5	55	50
96727	Ryse.....	Chatham.....	11	Daniel Dunning.....	".....	4	40	20
92745	Surprise.....	Charlottetown..	18	John H. Pidgeon....	".....	4	17	20
88518	W. F. Elizabeth..	Sydney.....	10	Bradford Le Page....	Rusticoville ...	5	16	50

PROVINCE OF QUEBEC.

GASPE COUNTY.

88464	Mary E.....	Arichat.....	10	John Rogers.....	Grand Entry....	6	53	80
85400	Minnie M.....	Amherst M. I..	13	J. J. Bushey.....	Old Harry.....	4	42	20
85399	Minnie May.....	".....	10	Ernest Cormier....	Amherst M. I..	4	39	20
94675	Success..	Halifax.....	16	R. J. Leslie & Co....	".....	5	52	50

SAGUENAY COUNTY.

92579	Cambridge.....	Halifax.....	43	John Stubbert, Sr....	Romaine.....	7	94	10
80754	Eugenie.....	Quebec.....	48	Louis S. Cormier....	Esquimaux Pt..	4	77	20
85750	H. B.....	".....	57	Edouard Boudreau...	".....	8	115	40
75445	Phoenix.....	Gaspe.....	28	Ulric Gagné.....	Caribou Ids....	2	42	60
75680	Sea Star.....	Quebec.....	52	Wm. LeBlanc.....	Esquimaux Pt..	5	88	50
107231	Ste. Anne.....	".....	13	Magloire Choinard ...	Manicouagan ...	3	34	90

SESSIONAL PAPER No. 22

APPENDIX No. 3.

NOVA SCOTIA.

District No. 1—Comprising the four counties of the Island of Cape Breton.

Inspector A. C. Bertram, North Sydney, C.B.

District No. 2—Comprising the counties of Cumberland, Colchester, Pictou, Antigonish, Guysborough, Halifax and Hants.

Inspector Robert Hockin, Pictou.

District No. 3—Comprising the counties of King's, Annapolis, Digby, Yarmouth, Shelburne, Queen's and Lunenburg.

Inspector L. S. Ford, Milton.

DISTRICT No. 1.

ANNUAL REPORT ON THE FISHERIES OF CAPE BRETON ISLAND.

NORTH SYDNEY, C.B., January 2, 1904.

To the Dominion Commissioner of Fisheries,
Ottawa.

SIR,—I have the honour to submit herewith my nineteenth annual report on the fisheries of District No. 1, comprising the four counties of the Island of Cape Breton, together with statistical tables showing in detail the catches of the various kinds of fish in each section and locality, with synopses of reports of overseers for the past year:—

The principal feature of the season's operations, I regret to say, is a total decrease in the value of fish of \$27,152.59. This is made up by a decrease in salmon (fresh), cod, haddock, hake, alewives, halibut, smelts, oysters, trout and squid. The decrease in salmon is 21,193 lbs.; in cod, 52,747 cwts. The decrease in cod has largely occurred in Cape Breton county and is due to scarcity of bait and the presence of dogfish.

The returns for the whole island show an increase in the following branches:—Herring (early summer), mackerel, lobsters, haddock, pollock and eels.

The decrease, besides salmon and cod, is in haddock, 12,817 cwts.; hake, 827 cwts.; halibut, 50,634 lbs.; trout, 6,210 lbs.; smelts, 7,000 lbs.; alewives, 8,126 brls.; oysters, 27 brls.; and squid, 711 brls.

By counties the increases and decreases are as follows:—

Inverness —Increase in total value is \$29,280, made up by pickled salmon, herring, mackerel and increased pack of lobsters. The decrease is in salmon (fresh,) cod, halibut, hake, pollock, trout, smelts, alewives, oysters and lobsters (fresh).

Cape Breton County.—The year's statistics give a decrease in total yield of \$195,707, caused by a short catch in mackerel, cod, haddock, hake, halibut, trout,

4-5 EDWARD VII., A. 1905

smelts, alewives, oysters, eels and squid. The increase is noticed in lobsters, salmon, herring, pollock and shad.

Richmond.—There is a marked increase in this county, the value of which is \$114,263. This increase is made up by herring, mackerel, lobsters, haddock, hake, pollock, alewives and eels. There is a decrease in salmon, lobsters (fresh), cod, halibut, trout, smelts and squid.

Victoria.—There is an increase of value reported in this county of \$34,310, made up by the surplus in the catch of herring, mackerel, lobsters, cod, haddock, trout, alewives, oysters and squid. The decrease has occurred in salmon (pickled,) mackerel and halibut.

Taking the whole island the statistics give the marked increase in the lobster product of 313,261 lbs. (canned,) and 2,843 cwt. fresh. Sixty canneries were in operation during the season and 1,034 persons employed, as compared with 54 canneries last year and 841 persons employed. To the fishermen of 68 per cent of the districts, the lobster fishery is the most profitable industry. They realize cash for their labour and product, and this cash comes to them at the beginning of the fishing season and after an idle winter. One feature of this particular industry, is that there is no interference from the dogfish pest, and another feature and a most pleasing one, is that the supply is kept up. This last fact may be accounted for by the enforcement of the regulations and a not too long fishing season. I am inclined to the opinion that there is one section in my district where the season might be shortened ten days without material loss to the packer and fishermen and greater advantage to the future of this valuable industry. There is, I learn from a reliable source, a likelihood of the packers forming a Provincial Association. I often wondered why the packers have never come together for the purposes of protection and material advantage. Such an association, if organized on a proper basis would result in benefit to the industry as well as to the packers. Now, rival packers are imposed upon by dishonest fishermen who take illegal fish, and if an honest packer refuses to take the catch from these fishermen as it comes, the catch will be offered to the rival cannery where the legally and illegally caught fish are likely to be taken, and thus it is that the honestly disposed packer loses the custom of the fisherman and his season's catch. Under a properly formed association of packers the latter could control the fishery by not permitting spawn or illegal lobsters to be taken by fishermen. Where they have such large investment in plant one would suppose that it is to their interests to preserve the fishery which only can be done by protection to the female lobster.

There can be no doubt the dogfish pest, is the greatest menace of the present day to the fishery of the Atlantic coast. Besides the millions of food fish these sea pests consume they frighten away the fish and those that mesh in nets are liable to be consumed before the fishermen can reach their nets. Frequently the nets are found cut and disorganized. The fishermen are pleased that the department contemplates adopting some methods for depleting the coastal waters of this pest.

There is no doubt that notwithstanding the several drawbacks to the prosecution of the fishery industry, such as the presence of the dogfish pest, scarcity of bait at times and frequently boisterous weather the coastal waters of my district are capable of producing many hundred per cent greater yields if the industry was only more vigorously prosecuted. The fishermen who prosecute the industry for a livelihood do so, in very many districts, in a most indifferent manner. Instead of working eight or ten hours per day, as other labourers have to do, they only work three or four and then only half the working days in a week.

The surrounding waters of Cape Breton island are capable of immense yields of food-fish if the fishing industry was prosecuted even half as vigorously as is our coal industry, but while the supply is there and the inducements offered by the government are great the average native fisherman is indifferent and is satisfied to continue the use of antiquated methods and prosecute the business as if he had not to depend upon it for a livelihood.

I would suggest that the department have compiled all necessary information of the extent and value of our fisheries and place the same before the fishermen of Great Britain, Holland and other countries, with the object of inducing them to immigrate to this country. The fisheries of the maritime provinces are capable of sustaining an immense population over and above the population now engaged in that industry.

SESSIONAL PAPER No. 22

SYNOPSIS OF REPORTS OF FISHERY OVERSEERS FOR THE ISLAND OF CAPE BRETON, 1903.

RICHMOND COUNTY.

Overseer Archd. Morrison, of Cannes, reports a larger number of vessels and men engaged in the industry than last season, yet there was a remarkable falling off in the catch of dried fish, while lobsters and mackerel showed a great increase. The decrease in the dried fish he attributes to the great scarcity of cod and haddock. The value of the fisheries was greater than in the previous year, owing to the higher prices ruling for almost all kinds of fish, together with the increased catch as of mackerel and lobsters. The most of the catch was disposed of at different points in Canada, the greater portion going to Halifax, while about ten per cent, was used for home consumption. The close seasons were well observed. All streams were free from mill refuse, &c.

Overseer D. R. Doyle, of West Arichat, reports a falling off in the catch of salmon, cod, haddock, halibut, and smelts. This falling off is accounted for, so far as cod and haddock are concerned, by a material reduction of the vessels usually frequenting the North bay. There was a satisfactory increase in all other branches of the industry. A new machine for the conversion of fish livers into oil was in operation, and this accounts for the large increase in fish oil. More vessels and boats engaged in the industry this year than last, consequently a larger number of men were employed. Had the weather been fine during the summer and fall months a much larger catch in all the branches would have been taken. The greater portion of the pickled fish was exported to Halifax and Charlottetown, while the bulk of the fresh fish found its way to Boston, Montreal, Toronto and Winnipeg. The several close seasons were well observed.

Overseer Arthur Brymer, of Lower L'Ardoise, reports that the season has been fairly prosperous. The following branches show an increase:—herring, mackerel, cod, haddock, hake and alewives. Lobsters and halibut show an average catch, and salmon shows a decrease. About the same number of men engaged in the industry as last year. All the product, with the exception of about five per cent, which was used for home consumption, was exported to Halifax. The live lobster catch was shipped to Boston. The fishery regulations in his district were well observed. Considerable damage has been done by the encroachment of American seiners inside the three mile limit, particularly in St. Peters bay, where nets and fishing gear were destroyed causing great loss to fishermen.

CAPE BRETON COUNTY.

Overseer John McLean, of Gabarus Lake, in his report states that the cod fall fishery was a failure, owing to the prevalence of stormy weather. Mackerel and herring were about the same as last year, although the presence of dogfish on the coast caused great injury to the latter fishery. Nearly all the cod and mackerel catch was sold in Halifax, except a small percentage used for home consumption. The lobster fishery shows a slight decrease. No abuses exist and the several close seasons were well observed.

Overseer C. E. Rees, of Port Morien, reports the catch for 1903 as being about up to the average, considering the fact that a less number of men are employed in the industry than formerly, as many who in previous years followed the fisheries now seek other means of employment. There is considerable falling off in July herring catch, which he attributes to the immense schools of dogfish which frequented the coastal waters during the month of July. Salmon also show a decrease.

Overseer A. R. Forbes, of North Sydney, reports a decrease in the number of vessels and boats, and consequently a less number of men were engaged in the fisheries of his district than during the year 1903. The returns also show a proportionate falling off. He is of the opinion, however, that next season will be a more remunerative one for the industry, as several of the fishermen, who had taken up other means of making a livelihood, have expressed themselves as intending to return to the prosecution of their calling. The mackerel fishery was poor. For this he can attribute no particular cause. The lobsters taken were unusually large and well filled, the larger ones being bought principally for shipment fresh.

4-5 EDWARD VII., A. 1905

Overseer Timothy Sullivan, of Little Bras d'Or, reports a general decrease in the fisheries of his district. This he attributes to the severe storms which were of such frequent occurrence during the past season, and to the fact that a large number of the fishermen have left the district to take up other employment.

Overseer M. R. McLinnis, of Amaguades Pond, reports an increase in cod and herring, owing to the abundance of these fish during the winter and summer season. About 80 per cent, of the total catch was sold in Canadian markets, the balance was used for home consumption. No abuses exist and the several close seasons were well observed.

VICTORIA COUNTY.

Overseer Charles McRae of Middle River, reports the catch of fish in his district to be about the same as in 1903, with the exception of salmon, which shows a decrease. This decrease he attributes to two causes, viz. : the presence of large fish of the whale species on the coast during the summer months, and to a less vigorous prosecution of the industry than formerly. Cod and herring were plentiful. About 65 per cent of the total catch was marketed in Canada ; the remainder was used for home consumption. No abuses exist and the close seasons were well observed.

Overseer Duncan Gillis, of Baddeck, North Branch, reports a decrease in the value of the total catch of fish in his district, in consequence of a falling off in all branches of the industry, with the exception of herring, pollock and eels. The most noticeable decrease is in salmon, which were very scarce in the Bras d'Or lake and St. Patrick's channel. Herring show a slight increase. These fish were plentiful in the spring. About one half the total catch was used for home consumption, the other half being disposed of in the Canadian markets. The close seasons were well observed, and no abuses exist.

Overseer Alex. Morrison, of Wreck Cove, reports a decrease in all kinds of fish except lobsters. The decrease in salmon he attributes to the heavy seas which prevailed, and which drove the nets ashore several times during the salmon season. The falling off in cod was owing to a less vigorous prosecution of the industry than in former years, the cod fishermen leaving that branch of the industry during the lobster season, as these fish were more plentiful and prices ranged high. Mackerel and herring were scarce in the spring and summer, and in the autumn the fishermen's nets were destroyed by dogfish. Nearly all the cod, haddock, herring and salmon was sold in Cape Breton. The mackerel catch was exported to Halifax, as was also the lobster shipment. The close seasons were well observed. Five fishways were operated in his district, all of which were in good condition.

Overseer D. P. Montgomery, of Neils Harbour, reports the cod fishery as being about the same as last year, a decrease in salmon and an increase in lobsters. Several of the fishermen at South Point left this locality during the first part of the season, hence the shortage in the catch in that district. The greater portion of the fish taken was exported to foreign countries ; a very small percentage being used for home consumption.

Overseer W. R. Moffatt, of Cape North, reports an increase in the value of the total catch, which he attributes, not so much to an increase in the quantity of fish taken, as to the higher prices which prevailed. The lobster catch was away above that of the previous year. This was due to the fact that a larger number of men engaged in the industry than last year. The cod catch shows an increase, while the salmon fishery was not as good as last year, owing to the scarcity of these fish and frequent storms. The mackerel catch was the smallest in many years. These fish struck in at Bay St. Lawrence in very large quantities, but the presence of dogfish on the coast prevented the fishermen from catching them. In fact from early in August until late in October the waters were teeming with these pests, making it almost impossible to catch fish of any kind. The fishermen of this district are all of opinion that unless some measures are taken to destroy the dogfish, the mackerel fishery will become a thing of the past. All the fish taken were sold in Canada, with the exception of about five per cent, which was used for home consumption. The close seasons were well observed ; the lobster packers and fishermen seeming most anxious to comply with the law in every respect.

SESSIONAL PAPER No. 22

INVERNESS COUNTY.

Overseer Wm. AuCoin, of Cheticamp, reports a good catch of cod, hake and had-dock. The quality of the June and July herring was excellent, although in quantity there was but an average catch. The lobster packers met with a considerable loss, owing to storms wrecking their gear and disabling them for the greater part of the season. The salmon fishery was an average one, although stormy weather interfered somewhat with the prosecution of this industry. The guardians' services were of great benefit, each officer performing his duty in a most satisfactory manner. About five per cent of the catch of fish was used for home consumption. The regulations were well observed.

Overseer A. A. Chisholm, of Margaree Forks, reports the spring fishery such as herring, alewives and salmon, almost a total failure. This he attributes to the presence of drift ice on the coast later than usual last season. The salmon catch during the latter part of the season was fair, and about 75 per cent of it was exported to the United States markets, the balance being sold in Canadian cities and used for home consumption. The catch of cod compares favourably with other years in proportion to the number of men engaged in the industry. The mackerel fishery was a failure. The lobster catch was an average one and good prices were realized. The close seasons were well observed.

Overseer Peter Gillies, of S. W., Port Hood, reports a large increase in the lobster fishery, and a falling off in all other branches in his division. The chief cause of the decrease in the fisheries he attributes to the damage done to fishing gear by dogfish. The regulations were well observed.

Overseer D. F. McLean, of Port Hood, reports a decrease in all branches of the fisheries in his district over the previous year, with the exception of lobsters, in which branch there was a substantial increase. For the falling off in the different branches he attributes three causes: 1st, unusual stormy weather; 2nd, the presence of dogfish in large numbers on the coast, and 3rd, a less vigorous prosecution of the industry. The larger portion of the different kinds of fish, with the exception of lobsters, is now used in the home market. Some of the dried fish is sent to Halifax for export, and most of the mackerel to the United States direct. Prices have ranged higher than in former years. The fishery regulations were well observed.

Overseer John B. McClellan, of Kingsville, reports that the fishing industry is not as vigorously prosecuted as in former years, owing to the active operations at the marble and lime works, Marble Mountain, where a large number of the men who formerly engaged in the fisheries now secure more remunerative employment, and consequently very few fishermen prosecute their calling now. All the fish taken, with the exception of mackerel, are used for home consumption. The regulations were well observed.

I have the honour to be,

Your obedient servant,

A. C. BERTRAM,
Inspector of Fisheries.

DISTRICT No. 2.

ANNUAL REPORT ON THE FISHERIES OF DISTRICT No. 2, NOVA SCOTIA, COMPRISING THE COUNTIES OF ANTIGONISH, COLCHESTER, CUMBERLAND, GUYSBOROUGH, HALIFAX, HANTS AND PICTOU.

PICTOU, N.S., January 2, 1904.

To the Dominion Commissioner of Fisheries,
Ottawa.

SIR,—I have the honour to submit my annual report of the fisheries of district No. 2, Nova Scotia, together with tabulated returns showing the increase or decrease of each kind of fish.

The estimated value of all the fish taken in the district during the past season is \$2,477,112, which is about 55 per cent over the estimated value of the catch of last year and is the greatest since the district was formed in 1889.

This increase is owing to a very large catch of mackerel, for if the catch of mackerel had been the same in 1903 as in 1902 the increase of the value of all the fish taken would be about 11 per cent.

Of the anadromous fishes the report shows :

- An increase in the value of the catch of salmon, 1 of about 2 per cent.
- An increase of about 77 per cent in the quantity of smelts.
- An increase of about 120 per cent in the quantity of shad.
- A decrease of about 7 per cent in that of alewives or gaspereau.

Of the deep-sea fishes :

Codfish	there is an increase of about	.....	2 per cent.
Haddock	"	"	4 "
Hake	"	a decrease	45 "
Pollock	"	an increase	33 "
Halibut	"	a decrease	50 "

Comparing the catch of the whole cod family including cod, haddock, hake and pollock with that of last year, there is an increase of about 4½ per cent in the quantities caught.

SALMON.

The reported catch is 2 per cent over that of last year and is well above the average since 1899.

On the Atlantic coast there was an increase of 5 per cent, on the Straits of Northumberland a decrease of 10 per cent, and on the Bay of Fundy portions of the district an increase of 14 per cent.

The past season has been a favourable one for the salmon fishery because during the spawning months, October and November, the rivers have been well supplied with water so that there was less likelihood of fish being destroyed by poachers.

SHAD.

This season's fishery has been unusual in one particular, viz. : that large quantities of these fish were taken when in the river to spawn. Usually there has been about 100 barrels taken at this time but this season the overseer in Stewiacke reports 1,000 barrels, this report was returned for correction or confirmation, but the officer adheres to his estimate.

SESSIONAL PAPER No. 22

The bay fishery was trifling, a report of which will be found in the remarks of Overseers Davison, of Colchester, and Mosher, of Hants.

I give below a table of the reported catch in this district since 1889.

	Barrels.		Barrels.
1889	535	1897	1,350
1890	750	1898	2,777
1891	1,178	1899	3,208
1892	1,811	1900	1,375
1893	1,346	1901	749
1894	951	1902	943
1895	1,185	1903	2,115
1896	1,179		

ALEWIVES OR GASPEREAU.

The reported catch is 10 per cent less than that of last year, but is about the average quantity taken during the past eight years.

The returns from the herring fishery show an increase of seventy-five per cent over that of last year, but that of last year was the smallest catch recorded since the district was set off.

Taking the returns of salted and fresh herring and computing the fresh herring as 200 lbs. equal to a barrel, the result shows the take to be only about $\frac{2}{3}$ of the average of the past 15 years.

As before remarked, the catch of mackerel has been very large, being 51,727 barrels, computing the fresh at 200 lbs. to a barrel. This is the largest return during the past 15 years: The average being about 22,000 barrels and the smallest 9,800 barrels.

DOGFISH.

From the Atlantic coast and the Straits of Northumberland the complaints are general of the apparently increasing quantities of these fish and of their interference with the line and net fisheries. The line fishing by taking the bait and the net fishing by destroying the fish in the nets and the nets also.

LOBSTERS.

The catch of lobsters has been about the same as that of last year. There were about 1,000 cases canned more than last year but the quantity exported fresh in shell was less.

I find that on the Atlantic coast where there are no lobster hatcheries the decrease was about seven per cent, and that on the Straits of Northumberland where there is a hatchery the increase was about fifteen per cent.

Generally over the district the close season for lobster fishing has been strictly observed. At Margarets bay, Halifax county, overseer Wm. Kennedy found traps set at different places and confiscated them and in Cumberland county there was some night poaching which gave Overseer John Campbell some trouble, but after spending a number of nights on the watch he succeeded in capturing and convicting the offenders.

There were 36 cases of violation of the Fisheries Act, before the Fishery Officers Court, during the past season and conviction obtained in all but three.

Twenty nets were seized and confiscated being set in violation of law.

SYNOPSIS OF OVERSEERS REPORTS.

Overseer A. R. McAdam, of Antigonish, says the spring and summer fishing was good but fall fishing was not either in trawling or net fishing and this was chiefly owing to the dogfish nuisance and also to a scarcity of bait. He thinks that if nothing be done to exterminate the dogfish the hake fishery will suffer.

Overseer J. W. Davidson, of Bass River, Colchester county, says the catch of shad in the Minas Basin is the smallest he has ever known since shad fishing was carried on as a business.

4-5 EDWARD VII., A. 1905

He attributes the failure of the fishery to two causes, overfishing and the whole-sale slaughter of the mother shad, during the whole spawning season while ascending the rivers.

Going back to 1846, when fishing was first carried on by drifting nets attached to boats each boat having two men and carrying from 100 to 150 fathoms of net about two fathoms deep in the water. At that time the fish were plentiful and the boats were loaded with beautiful fish. This fishing was carried on for a few years only to a limited extent by a man, one Halliday—who established several fishing stations in Colchester and had a fleet of ten boats. Later on fishermen engaged in this fishery in increasing numbers and with longer nets, instead of 100 fathoms they used nets 400 fathoms long and there were a number of weirs built on the flats but the shad remained plentiful.

Later on they continued fishing until September and October and as in the bay the shad always school before leaving (and they are mostly female shad with immature spawn) large numbers were taken.

The worst destruction however is in the Stewiacke and Shubenacadie rivers where they are spawning.

Go up these rivers in the morning and you will find probably 100 nets set two-thirds across the river, but there will be a net on one side and the next net on the opposite side so that fish have very little chance of passing them and reaching their spawning places.

The fishing for shad in September and October leads to salmon being caught in the nets and they are not liberated. Overseer John Campbell, of Northport, Cumberland county, says, there was a decrease in the quantity of lobsters caught in the western portion of Cumberland county on the Northumberland straits, and he attributes this to the fact that in the adjoining district in New Brunswick there is *practically no close season*, that lobsters are caught in the fall over an extended area and are not there during the legal season for fishing.

There was some illegal fishing for lobsters in his division but he has convicted and fined and confiscated the gear of the worst offenders and believes it has been suppressed.

Overseer John W. Davis, of Guysborough, says there was a very large catch of mackerel in the Chedabucto bay and good prices were realized for them, the catch was more than four times larger than last year.

The cod, haddock and pollock fisheries also show a large increase, because of more vigorous efforts in the fall months.

Squid for bait was scarce, and the dogfish were not, but were very troublesome, hampering all branches of fishing.

The season was a prosperous one, the guardians active in the discharge of their duties, only one violation of law came to his notice and the offender was fined.

Overseer David Reid, of Port Milford, Guysborough, says, the quantity of fish caught was not up to the average, but as prices were higher the fishermen have had a fairly successful season.

Mackerel and herring were very plentiful about May 15, and cod were also plentiful in the spring, but the dogfish and squid did not come in the usual quantities, so that in July and August, fishing was almost suspended for want of bait.

A new steamer has been coasting from Halifax to Guysborough, the *Strathcona*, and as fishermen can now sell their fish fresh it is probable there will be more engaged in fishing.

On the several rivers in this division the law appears to have been well observed and the guardians active in their duties.

The close season for lobsters was well observed and no case of illegal fishing came to his notice.

Overseer Robert Gaston, Pope's Harbour, Halifax, says, there was a decrease in the cod, haddock and halibut fishing results owing to boisterous weather and the dogfish appearing on the fishing grounds, after June 1.

The close seasons have been fairly well observed, and also the sawdust regulations. Three fishways in his division are in good repair.

Overseer George Rowlings, Musquodoboit Harbour, Halifax, says, the quantity of cod, &c., taken by the boat fishermen was much less than last year, the fish were plentiful but

SESSIONAL PAPER No. 22

owing to rough weather and scarcity of bait fewer fish were caught. He says the clams are a poor bait and are only used when no better is obtainable.

Not so many mackerel were taken but the fishermen say they would have had fair catches but for the dogfish which were in such large numbers they took their nets ashore to save them.

Salmon were fairly plentiful. Alewives only half a catch and in rivers where they usually appear, there were none at all this season.

Herring were more abundant and in the autumn a large school of very small herring about the size of smelts were in the waters at Clam harbour where some 300 barrels were taken for lobster bait, lobsters seem to be more plentiful and he believes it is partly owing to the strict observance of the close season, and recommends continued vigilance by officers and cutters.

He remarks that the livers of the codfish seemed small and poor this year and did not yield the usual quantity of oil.

A fishway should be put in a dam on the Laurencetown river.

Overseer James R. Mosher, of Hants county, says the shad fishery in the bay was a total failure and unless the fish are protected when in the river to spawn, that this state of matters will not be improved.

Overseer Prichard, of Pictou county, says that netting and spearing of salmon was not so frequent this year as in other years, owing to the persons being employed in the lumber woods and elsewhere.

Three large salmon nets were confiscated, that were found set in the West river and in the East river.

The frequent freshets during the spawning season, were highly favourable to these fish.

Overseer A. J. McDonald says spring herring were plentiful, the salmon fishing about an average. The cod, haddock and hake fishery was not as good as last year. Dogfish swarmed inshore and greatly hindered the fishing.

The close seasons were well observed and the protection of the rivers faithfully conducted. No violation of the Fisheries Act came to his knowledge.

There was a good run of water in the rivers and numbers of salmon on the spawning grounds.

Overseer James Kitchen, continues to urge the necessity of fishways in two dams on the River John in the county of Pictou.

I have the honor to be, sir,

Your obedient servant,

ROBERT HOCKIN,
Inspector of Fisheries.

DISTRICT No. 3.

MILTON, QUEEN'S COUNTY, N.S.,
January 2, 1904.

To the Dominion Commissioner of Fisheries.

SIR,—I have the honour to submit my report of the fisheries of district No. 3, province of Nova Scotia, for the year 1903, together with statistics of each county comprising the said district.

Compared with 1902 this district shows a decrease of \$361,903.

1902	\$4,609,900
1903	4,247,997
Decrease	\$361,902

The decrease in cod fisheries accounts for the bulk of the falling off; the comparative figures being :—

1902	\$1,895,140
1903	1,690,663
Decrease	\$205,477

The want of bait, the dogfish pest, scarcity of men, and possibly absence of fish on banks may account for the unusual decrease in this important fishery.

Lobsters make a good showing: an increase of \$196,316 over last season.

Fresh in shell, 1903	\$1,009,570
Canned "	382,672
	\$1,392,242
1902	\$1,195,926
Increase	\$196,316

There are such conflicting reports concerning this important fishery, that your officers feel a pardonable pride at this showing, as despite the pessimistic opinions of interested people, the business shows no falling off and lobster are more plentiful than for years past.

It is time a strict watch should be constantly kept on lobster packers and fishermen alike, to prevent their suicidal policy of killing the small fish but we have very little to complain of as to the destruction of berried lobsters, as very few fishermen destroy them.

MACKEREL

Make a trifle better showing, but the once thriving business along our coasts seems to be gradually falling off. They continue to school off our shores, but except in a few places they do not come within reach.

The cause of this persistent shunning the shores, may not be far to seek, but no one seems as yet to have found it.

SESSIONAL PAPER No. 22

HERRING

Like the mackerel, seem to give the places they once frequented, a wide berth, but a few more were caught this year than last year, an increased catch of \$23,974.

Haddock, hake and pollock show an increased yield of over \$30,000.

Salmon, exceed last year but the whole catch year by year is far too small, taking into consideration what it might be if properly cared for. This important fish besides being particularly the sportsman's delight, is very valuable, bringing in early spring fabulous prices, and is an important factor in the income of the inhabitants along the rivers frequented by them.

All other fish are an average catch except shad—once an important fishery—now fast becoming depleted. Our officers in the immediate vicinity of former shad fisheries claim, that unless immediate protection is given the spawning shad, they will soon become extinct. How best to regulate such protection requires considerable thought, but that something should be done in that direction is quite evident.

Much has been done but much remains yet to do to bring our rivers and brooks back to their normal condition, not only as regards the salmon but the gasperau and the trout, both in a certain way valuable fish.

Practical passes around or through every dam on our rivers, that will enable the fish to ascend to the head waters and lakes; and sensible well considered regulations enforced, will, in a few years, increase the river fisheries to any needed extent.

There is one important factor in this river fishery that does not receive the consideration it should, that is the influence these fisheries have on the deep sea fisheries. It is a well known fact that all deep sea fish that frequent the bays and harbours where large bodies of fresh water empty are there in search of food which is furnished by the young fish coming down the rivers to the sea.

Thus the absence of mackerel in our harbour may be accounted for by this lack of food supply which would be furnished them were the river as prolific as nature intended. It is one eternal round of the big ones eating the little fish, and the young of the gaspereau are frequently found in the mackerel, thus proving their object in seeking our bays and harbours, all of which shows the necessity of more rigid protection of our rivers.

Again, the contention between the Provincial and Dominion governments re control of rivers and foreshores of the provinces and the stand taken by the provincial judges, handicap your officers in their work, as it is almost impossible to enforce existing laws under the circumstances.

I am sir,

Your obedient servant,

L. S. FORD,

Inspector, District No. 3.

DISTRICT No. 1.

ISLAND OF CAPE BRETON.

RETURN Showing the Number and Value of Vessels, Boats, Nets, &c., also the Kinds of Fish Caught in the County of Richmond, Province of Nova Scotia for the year 1903.

Number.	Fishing District.				Fishing Vessels and Boats.				Fishing Gear and Materials.				Kinds of Fish.						
	Vessels.		Boats.		Gill Nets.		Trawls.		Lobster (canned), No.	Salmon fresh, lbs.	Salmon preserved in cans, lbs.	Herring salted, lbs.	Herring fresh, lbs.	Mackerel fresh, lbs.	Mackerel salted, brls.	Lobsters, preserved in cans, lbs.	Lobster, fresh in shell, cwt.		
	Tonnage.	Value.	Men.	Number.	Value.	Number.	Patrons.	Value.										Number.	Value.
Richmond Co.																			
1	Canso to Port Malcolm.....	5	191	3800	30	75	750	80	1000	20000	1000	5	25	700		1500		1	
2	River Inhabitants to St. Louis ..	2	64	1500	7	129	1290	140	1250	24300	1950	17	85	1110		600		2	
3	River Bourgeois.....	19	349	4000	100	30	24	35	310	6200	1240	8	40	30		5	25104	3	
4	Janvirin Island to Cape Auguet.	2	37	570	6	143	1410	184	770	15300	6400	150	750	966	2900	824	31200	4	
5	Arichat and Petit de Grat	12	209	3000	56	107	1244	152	510	10200	4080	270	1350	1624	4000	458	48280	5	
6	Rocky Bay and vicinity.....	2	57	900	17	64	820	102	366	7380	2925	50	250	255	2600	477	9168	6	
7	Descousse to Martinique	2	119	1330	33	21	200	29	105	2100	850	37	185	115	900	309		7	
8	St. Peters	5	80	1400	29	19	220	57	135	2700	725	12	80	50	2000	60		8	
9	Grand Grove and vicinity.....					20	350	58	75	1500	500			100	4000	60	20496	9	
10	Rockdale and vicinity	2	36	500	11	52	750	120	140	3650	1000	29	30	350	16000	1000	30096	10	
11	L'Ardoise lower and west	5	100	3800	32	243	7800	538	3100	66300	35150	77	780	500	80000	7000		11	
12	Pt. Michaud and Grand River ..					50	1100	112	610	12200	3240	33	300	90	1000	800	19008	12	
13	L'Archevéque					27	320	72	140	2400	800	6	30	10	700	100	22818	13	
14	St. Esprit					121	230	32	60	1580	400	8	50	30	500	150		14	
15	Frauboise and vicinity.....					31	670	90	105	3400	800	28	135	25	1700	150		15	
16	Fouchu.....	1	18	600	4	32	2000	92	173	3200	900	20	100	60	1000	200	48960	16	
17	Irish Cove to Black River including Indian Reserve and Linchy river.....					68	700	109	107	2040	665	18	140	215	44000			17	
Totals		57	1260	21400	325	1123	20094	1962	9258	184450	68928	768	4320	6230	61300	154650	13693	255160	1344
Values.....											640	258	28035	1613	18558	205395	63790	6720	

RETURN showing the Number, Tonnage and Value of Vessels, Boats, Nets, &c., also the kinds of Fish in the County of Cape Breton--Nova Scotia--Continued.

Number.	Fishing Districts.	Fishing Vessels and Boats.						Fishing Gear or Materials.						Kinds of Fish.								
		Vessels.			Boats.			Gill Nets.			Trawls.			Lobster (Canneries, No.	Salmon, fresh, lbs.	Herring, salted, bbls.	Herring, fresh, lbs.	Mackerel, fresh, lbs.	Mackerel, salted, bbls.	Lobsters, preserved in cans, lbs.	Lobsters, fresh in shell, cwt.	
		Number.	Tonnage.	Value.	Men.	Number.	Value.	Men.	Number.	Fathoms.	Value.	Number.	Value.									
Cape Breton.																						
1	Gabarus and vicinity.	4	91	2000	20	52	2600	118	336	6550	3300	42	200	2	4500	320	2400	330	71032	800	1	
2	Louisburg.					35	1050	70	195	4875	1900	42	200	2		272	2400	194	42576	2600	2	
3	Big Lorraine and vicinity.					28	1400	56	250	6250	2500	50	250	1	2050	119	3080	178	14920	900	3	
4	Little Lorraine to Mira River, including Main-a-Dieu.	2	27	500	8	63	1248	143	464	17190	5040	38	265	2	11540	332	100	6100	171	53616	23	4
5	Scatarie Island					19	1460	57	114	2960	1710	14	140			120		55			5	
6	Port Morien and vicinity.	1	13	900	3	41	584	52	185	3700	1430	80	306	3	304	52		1100	44	62088		6
7	Schooner Pond and Glace Bay.	1	12	300	4	60	990	83	380	7600	3420	100	1000			350	1200	32		1400	7	
8	Lingan and Low Point.					23	380	46	100	2000	900	40	400	2		350	8000	30	15840	200	8	
9	South Bar.					6	100	10	50	1000	450	20	200			100	2000	16			9	
10	North Sydney to Boisdall.	2	18	300	6	25	350	42	79	1580	413	16	144			1735					10	
11	Little Bras d'Or and Sydney Mines.	2	28	800	12	36	640	54	115	2500	410	42	366	2	700	8		18	65184		11	
12	Piper Cove to East Bay.					57	796	82	85	1795	508	50	147		100	753	17000				22	
Totals.		12	189	4800	53	445	11598	813	2353	22300	21981	492	3418	14	19194	4511	34380	13270	1068	323256	5945	
Values															3839	20299	344	1592	16020	81314	29725	

SESSIONAL PAPER No. 22

RETURN showing Quantity and Value of Fish, &c.—Nova Scotia—Continued.

Fishing District.	KINDS OF FISH.													FISH PRO- DUCTS.		Seal skins, number.	TOTAL VALUE OF ALL FISH.	Number.				
	Cod, dried, cwt.	Cod, tongues and sounds, brls.	Haddock, fresh, lbs.	Haddock, dried, cwt.	Hake, dried, cwt.	Pollock, cwt.	Halibut, lbs.	Trout, lbs.	Shad, brls.	Smelts, lbs.	Alewives or Gaspe- reau, brls.	Eels, brls.	(Oysters, brls.	Flounders, lbs.	Tom Cod or frost fish, lbs.				Squid, brls.	Fish oil, galls.	Fish as bait, brls.	
Cape Breton Co.																						
1 Gabarus and vicinity	2800	.....	.....	330	.....	225	2200	300	30	2200	160	.....	.....	10	.....	.....	25	1100	20	.....	44,868 00	1
2 Louisburg	1315	.....	.....	351	90	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	260	1600	400	.....	37,359 00	2
3 Big Lorraine and vicinity	769	.....	.....	247	.....	160	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	860	240	.....	17,397 55	3
4 Little Lorraine to Mira River, including Main-a-Dieu	3600	.....	.....	359	.....	286	2190	350	235	1150	29	1	.....	.....	.....	.....	5	1550	235	.....	42,093 00	4
5 Scatarie Island	1150	.....	.....	120	.....	65	3000	.....	.....	.....	8	.....	.....	.....	300	.....	25	1150	6	12	7,840 00	5
6 Port Morien and vicinity	513	.....	5088	179	.....	79	1377	.....	.....	.....	.....	5	36	.....	.....	.....	9	29	201	.....	20,370 84	6
7 Schooner Pond and Glace Bay	700	.....	.....	.....	.....	101	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	200	.....	12,749 00	7
8 Lingau and Low Point	440	5	.....	100	27	65	1500	.....	.....	.....	20	10	.....	.....	.....	.....	20	450	160	.....	10,430 75	8
9 South Bar	100	.....	.....	20	10	10	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	10	100	50	.....	1,407 50	9
10 North Sydney to Boisdall	665	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	10	.....	.....	.....	.....	.....	.....	.....	.....	10,900 00	10
11 Little Bras d'Or and Sydney Mines	946	.....	.....	112	.....	60	4600	.....	.....	.....	.....	25	.....	.....	.....	.....	2	242	525	.....	23,033 10	11
12 Piper Cove to East Bay	664	.....	.....	.....	.....	23	.....	2800	.....	4200	50	114	8	.....	.....	4000	.....	86	80	.....	8,858 30	12
Totals	13662	5	5088	1818	127	1074	14867	3450	265	7550	267	165	8	46	300	4000	356	7167	2117	12	.....	.....
Values	61479	50	152	5454	286	2148	1486	345	2650	377	1068	1650	40	92	9	120	1424	2150	3175	15	237,307 04	.....

RETURN showing the Number, Tonnage and Value of Vessels, Boats, Nets, etc., also the Kinds of Fish, in the County of Victoria, Province of Nova Scotia, for the Year 1903.

Number.	FISHING DISTRICTS.				FISHING VESSELS AND BOATS.				FISHING GEAR OR MATERIALS.				KINDS OF FISH.						Number.						
	Vessels.		Boats.		Gill Nets.		Trawls.		No. of Lobster Canneries.		Salmon, fresh, lbs.		Salmon, salted, brls.		Herring, salted, brls.		Herring, fresh, lbs.			Mackerel, fresh, lbs.		Mackerel, salted, brls.		Lobsters, preserved in cans, lbs.	
	Number.	Tonnage.	Value.	Men.	Number.	Value.	Men.	Number.	Fathoms.	Value.	Number.	Value.	No. of Lobster Canneries.		Salmon, fresh, lbs.	Salmon, salted, brls.	Herring, salted, brls.	Herring, fresh, lbs.		Mackerel, fresh, lbs.	Mackerel, salted, brls.	Lobsters, preserved in cans, lbs.			
Victoria Co.																									
1	Big Bras d'Or				15	30	20	13	72	24	14	15	4800			15	165	400	4					1	
2	North and So. side Little Narrows.				46	421	45	100	2501	528	18	43				155								2	
3	Baddeck Bay and vicinity				30	415	29	62	1801	716	4	27	720			67	18800							3	
4	Barachois				12	100	20	38	1280	460	10	100	2000			40								4	
5	Indian Brook to French River				51	920	96	177	4930	1755	42	420	1230			130		1000	63					5	
6	Wreck Cove to Snokyhead				24	450	48	86	3080	1180	20	200	2000			57								6	
7	South Bay	11	88	3300	44	250	50	200	5000	1600	10	200												7	
8	North Bay and Middle Head	10	80	2000	40	1790	74	322	8050	1582	70	1400												8	
9	Green Cove and South Point				8	160	10	8	160	80	4	48	12300	80		68		1200		398				9	
10	Neil's Harbour				54	2040	60	90	1800	900	24	480				30	4500	3000						10	
11	New Haven				40	1600	55	80	1600	800	8	160				10	4000	2400						11	
12	Dingwall				15	250	45	79	3570	1700			4500			20			50					12	
13	White Point				30	500	50	23	1000	600	8	40	3000			40			20					13	
14	Sparling Brook to Money Point				12	120	24	24	890	369	5	60	400			25			10					14	
15	Bay St. Lawrence and vicinity				36	485	72	71	2720	1460	9	108	4200			18			117					15	
Totals		21	168	5300	84	9521	698	1373	38454	13754	246	3301	35710	80	675	30465	8000	724½	177014						
Values													7142	1200	3037	304	960	10867	44253						

Return showing the Kinds and Quantities of Fish and Fish Products in the County of Victoria, Province of Nova Scotia, for the Year 1903.

Fishing Districts.	Kinds of Fish.											Fish Products.		TOTAL VALUE OF ALL FISH.	Number.				
	Lobsters, fresh in shell, cwt.	Cod, dried, cwt.	Cod, Tongues and Sounds, brls.	Haddock, dried, cwt.	Pollock, cwt.	Halibut, lbs.	Trout, lbs.	Smelts, lbs.	Alwives or Gas- pereau, brls.	Eels, brls.	Oysters, brls.	Flounders, lbs.	Tom Cod or Frost Fish, lbs.			Squid, brls.	Coarse and Mixed Fish, brls.	Fish Oil, galls.	Fish as bait, brls.
Victoria Co.																			
1 Big Bras d'Or.....	80	245	.....	15	100	.....	.....	4700	19	25	43	.....	4300	.....	40	.....	81	18	2,884 65
2 North and So. side Little Narrows.....	.....	274	.....	.....	1	.....	1250	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	3,093 80
3 Baddeck Bay and vicinity.....	1	62	.....	.....	6	100	240	900	12	25	6	.....	.....	.....	6	23	11	.....	1,454 40
4 Barachois.....	.....	38	.....	5	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	5	2	1	.....	837 10
5 Indian Brook to French River.....	.....	207	.....	52	23	300	.....	.....	.....	.....	.....	.....	.....	5	80	240	12	.....	10,307 50
6 Wreck Cove to Smoky Head.....	.....	115	.....	25	15	300	.....	.....	.....	.....	.....	.....	.....	3	50	110	10	.....	6,025 00
7 South Bay.....	.....	700	.....	75	.....	.....	.....	.....	.....	.....	.....	.....	.....	25	.....	90	25	.....	3,539 50
8 North Bay and Middle Head.....	.....	5404	.....	1820	317	4460	.....	.....	.....	.....	.....	.....	.....	152	.....	2321	135	.....	52,946 80
9 Green Cove and South Point.....	.....	150	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	70	.....	.....	982 00
10 Neil's Harbour.....	.....	3200	3	150	.....	3000	.....	.....	.....	.....	.....	1800	.....	40	.....	550	.....	.....	18,643 00
11 New Haven.....	.....	1800	.....	160	.....	2000	.....	.....	.....	.....	.....	.....	.....	30	.....	300	.....	.....	14,675 00
12 Dingwall.....	.....	140	.....	35	.....	9000	.....	.....	.....	.....	.....	.....	.....	5	.....	160	10	.....	5,114 00
13 White Point.....	.....	620	.....	150	50	1000	.....	.....	.....	.....	.....	.....	.....	50	.....	700	20	.....	6,604 00
14 Sparling Brook to Money Point.....	.....	80	.....	10	20	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	50	5	.....	4,479 00
15 Bay St. Lawrence and vicinity.....	.....	470	.....	85	.....	4500	.....	.....	.....	.....	.....	.....	.....	40	.....	485	40	.....	13,889 00
Totals.....	81	13505	3	2582	534	24600	1490	5600	31	50	49	1800	4300	350	181	5182	287	.....	.....
Values.....	405	60772	30	7746	1068	2460	149	280	124	500	245	54	129	1400	362	1554	430	.....	145,474 75

RETURN showing the quantity and value of fish, &c.—Nova Scotia—Continued.

Number.	Districts.	KINDS OF FISH.												FISH PRODUCTS.				TOTAL VALUE OF ALL FISH.	Number.			
		Haddock, fresh, lbs.	Haddock, dried, cwt.	Haddock, smoked tinned haddies, lbs	Hake, dried, cwt.	Hake, sounds, lbs.	Pollock, cwt.	Halibut, lbs.	Trout, lbs.	Smelts, lbs.	Alewives or gaspe- reau, bbls.	Eels, bbls.	Oysters, bbls.	Clams, bbls.	Tom cod or frost fish, lbs.	Squid, bbls.	Coarsted and mixed fish, bbls.			Fish oil, galls.	Fish as bait, bbls.	Fish as manure, bbls.	Seal skins, No.
1	Inverness Co.																					
1	Meat Cove to Fishing Cove																					
2	Eastern Harbour to Cape Rouge																					
3	Cheticamp Pt. and Lake																					
4	Chimney Corner and vicinity																					
5	Margaree district																					
6	Doncett's Cove and vicinity																					
7	Broad Cove and Light Point																					
8	Mabou and vicinity																					
9	Port Hood																					
10	Judique districts																					
11	Long Point and Low Point																					
12	Port Hastings to Hawkesbury																					
13	West Bay and Malagawatch																					
14	River Dennis																					
15	Whycocomagh																					
Totals																						
Values																						

RECAPITULATION

Of the Yield and Value of the Fisheries of the Island of Cape Breton for the year 1903.

Kinds of Fish.	Quantity.	Rate.	Value.	Total Value.
		\$ cts.	\$ cts.	\$ cts.
Salmon, fresh. Lbs.	97,272	0 20	19,454 40	
" preserved in cans "	3,121	0 15	468 15	
" pickled. Brls.	99	15 00	1,485 00	21,407 55
Herring, salted. "	13,975	4 50	62,887 50	
" fresh. Lbs.	729,805	0 01	7,298 05	70,185 55
Mackerel, fresh. "	176,620	0 12	21,194 40	
" salted. Brls.	16,797½	15 00	251,962 50	273,156 90
Lobsters, preserved in cans. Lbs.	1,086,922	0 25	271,730 50	
" fresh or alive Cwt.	7,863	5 00	39,315 00	311,045 50
Cod, dried "	59,587	4 50	268,141 50	
" tongues and sounds. Brls.	146	10 00	1,460 00	269,601 50
Haddock, dried. Cwt.	14,035	3 00	42,105 00	
" fresh. Lbs.	583,538	0 03	17,506 14	
" smoked (finnan haddies). "	98,000	0 06	5,880 00	65,491 14
Hake, dried Cwt.	2,048½	2 25	4,609 12	
" sounds. Lbs.	816	0 50	408 00	5,017 12
Pollock. Cwt.	5,377	2 00		
Halibut. Lbs.	64,816	0 10		10,754 00
Trout. "	17,970	0 10		6,481 60
Shad. Brls.	265	10 00		1,797 00
Smelts Lbs.	45,350	0 05		2,650 00
Alewives. Brls.	1,591	4 00		2,267 50
Eels "	920	10 00		6,364 00
Oysters. "	317	5 00		9,200 00
Clams "	522	2 00		1,585 00
Flounders. Lbs.	258,090	0 03		1,044 00
Tom cod or frost fish "	195,000	0 03		7,742 70
Squid. Brls.	2,844	4 00		5,850 00
Coarse and mixed fish. "	3,649	2 00		11,376 00
Fish oil. Galls.	34,386	0 30		7,298 00
Fish as bait. Brls.	8,539	1 50		10,315 80
" as manure. "	489	0 50		12,808 50
Seal skins No.	52	1 25		244 50
Dog fish. Lbs.	274,300	0 01		65 00
				2,743 00
Total for 1903.				1,116,491 86
" 1902.				1,143,644 45
Decrease.				27,152 59

RECAPITULATION.

STATEMENT showing the Number and Value of Fishing Crafts, Nets, &c., in the Island of Cape Breton for the year 1903.

Articles.	Value.	Total.
	\$ cts.	\$ cts.
117 fishing vessels, 2,007 tons (611 men)	40,000 00	
2,688 fishing boats (4,694 men).	52,276 00	
14,396 gill-nets (280,392 fathoms).. . . .	116,717 00	
2 seines (450 fathoms).	295 00	
2 trap-nets.	200 00	
1,898 trawls.. . . .	13,017 00	
20 weirs.....	200 00	
18 smelt-nets	663 00	
10,795 hand lines.....	6,828 00	230,096 00
62 lobster canneries (1,034 persons employed).....	44,525 00	
121,911 " traps	67,286 00	111,811 00
28 freezers and ice houses.	10,870 00	
1,345 smoke and fish houses.....	41,003 00	
373 piers and wharfs.....	62,428 00	
62 tugs, steamers and smacks	11,465 00	125,766 00
Total		467,673 00

NOVA SCOTIA—DISTRICT No. 2.

RETURN showing the Number, Tonnage and Value of Vessels, Boats, Nets, &c., also the Kinds of Fish in the County of Cumberland, Province of Nova Scotia.

Number.	DISTRICT.	FISHING VESSELS AND BOATS.						FISHING GEAR OR MATERIALS.								KINDS OF FISH.					No. of Lobster Canneries.	Number.		
		Vessels.			Boats.			Gill Nets.		Trawls.		Weir.		Hand Lines.		Salmon, fresh, lbs.	Salmon, smoked, lbs.	Herring, salted, brls.	Herring, fresh, lbs.	Herring, smoked, lbs.				
		Number.	Tonnage.	Value.	Men.	Number.	Value.	Number.	Fathoms.	Value.	Number.	Value.	Number.	Value.										
Cumberland County.																								
1	Pugwash, Malagash and Gulf Shore	1	18	300	2	103	2145	109	301	6046	1978					25					1			
2	Port Philip, Northport and Amherst Shore					145	2600	255	280	7600	2575					12		285	24000	135000	2			
3	Wallace					17	170	17	10	220	80										3			
4	River Philip					5	50	5	10	200	100									500	4			
5	La Planche, Nappan and Maccan					3	60	6	9	180	75									1000	5			
6	Minudie to Apple River	1	13	300	4	12	230	29	31	1810	605	13	65							6400	6			
7	Advocate					5	130	12	8	300	60	2	40							400	7			
8	Spencers Island					4	80	8	6	240	42	2	40							30	8			
9	Port Greville					4	80	8	4	80	70	3	120							300	9			
10	Parrsboro'					5	300	12	12	720	60	3	60							3500	10			
11	Two Islands					2	30	4	1	20	20			1	40	6	25	15	9	450	11			
Totals		2	31	600	6	305	5875	465	672	17416	5665	23	325	1	40	108	76	709	34300	135000				
Values																				2510	100	3190	343	2700

RETURN showing the Kinds and Quantities of Fish and Fish Products in the County of Cumberland, Province of Nova Scotia,
for the Year 1903.

Number.	DISTRICT.	KINDS OF FISH.														FISH PRODUCTS.			TOTAL VALUE OF ALL FISH.	Number.						
		Mackerel, fresh, lbs.	Lobsters, preserved in cans, lbs.	Lobsters, fresh in shell, cwt.	Cod, dried, cwt.	Haddock, fresh, lbs.	Haddock, dried, cwt.	Hake, dried, cwt.	Pollock, cwt.	Halibut, lbs.	Trout, lbs.	Shad, brls.	Smelts, lbs.	Alwives or (tas- pereau, brls.	Eels, brls.	Oysters, brls.	Clams, brls.	Flounders, lbs.			Tom Cod or Frost Fish, lbs.	Coarse and Mixed Fish, brls.	Fish Oil, galls.	Fish as bait, brls.	Fish as manure, brls.	
<i>Cumberland County,</i>																										
1	Pugwash, Malagash and Gulf Shore.	6700	383760	180	...	...	...	...	...	...	2	17500	...	...	...	619	...	...	...	...	...	1850	3500	106,519	00	1
2	Port Philip, Northport and Amherst Shore.	3000	63888	135	...	...	...	...	...	...	...	90000	50	25	...	43	...	...	...	1000	...	4000	1300	35,185	50	2
3	Wallace.	...	...	...	...	...	...	...	...	500	...	9100	238	10	...	...	...	...	3500	54	...	...	...	2,320	00	3
4	River Philip.	...	...	...	...	...	...	...	...	500	...	...	100	30	...	...	...	...	1000	...	...	...	...	850	00	4
5	La Planche, Nappan and Maccan.	...	...	...	...	...	...	...	...	300	...	2000	400	...	...	...	...	...	1000	...	...	...	...	1,960	00	5
6	Minudie to Apple River.	...	...	...	20	10000	60	20	400	7000	150	2000	75	...	...	...	...	1000	1000	...	100	40	...	6,995	00	6
7	Advocate.	...	...	...	600	400	500	400	300	1000	...	...	...	...	...	...	...	500	...	...	20	4	...	6,054	00	7
8	Spencers Island.	...	...	...	20	300	50	400	11	800	...	...	...	...	...	...	...	400	...	...	50	3	...	1,372	50	8
9	Port Greville	...	...	...	40	400	25	...	30	2000	...	...	...	...	...	...	...	300	...	...	...	...	...	815	00	9
10	Parrsboro'	...	...	...	15	229	4	...	20	2000	...	...	...	...	...	...	...	300	...	...	...	3	...	1,107	10	10
11	Two Islands.	...	...	...	15	...	20	...	30	550	...	...	...	...	...	...	...	300	...	...	...	...	...	382	00	11
Totals.		9700	447648	315	710	11320	659	820	791	13350	1300	152	120600	863	65	729	43	2500	5500	1054	170	5900	4800			
Values.		1164	111912	2205	3195	339	1977	1845	1582	1335	130	1520	6030	3452	650	3645	86	75	165	2108	51	8850	2400	163,560	10	

RETURN showing the Number, Tonnage and Value of Vessels, Boats, Nets, &c., and the Kinds of Fish in the County of Colchester—
Nova Scotia, for the year 1903.

Number.	FISHING BOATS.				FISHING GEAR OR MATERIALS.				KINDS OF FISH.						
	Fishing Districts.		Men.		Gill Nets.		Weirs.		Lobster canneries.	Salmon, fresh, lbs. Herring, salted, brls. Herring, fresh, lbs. Herring, smoked, lbs. Lobsters, preserved in cans, lbs. Cod, dried, cwt.					
	Number.	Value.	Men.	Number.	Fathoms.	Value.	Number.	Value.	Number.	Value.					Number.
<i>Colchester County.</i>															
1 Sterling	29	580	29						3	2200					1
2 Stewiacke	140	1350	260	280	8400	2100									2
3 Five Islands	8	400	16				1	200							3
4 Economy	5	125	13	5	1625	250	4	600				15	5000		4
5 Little Bass River to Highland Village	15	500	30	15	5000	900	1	400				10	3000	6000	5
6 Great Village to Queen's Village	12	360	24	12	3900	720									6
Totals	209	3315	372	312	18925	3970	6	1200	3	2200	122590	25	8000	6000	430
Values											24518	112	80	120	1935

SESSIONAL PAPER No. 22

RETURN showing the Kinds and Quantities of Fish and Fish Products in the County of Colchester—Nova Scotia, for the year 1903.

Number.	Fishing District.	Kinds of Fish.												Total Value of All Fish.	Number.		
		Haddock, fresh, lbs.	Haddock, dried, cwt.	Hake, dried, cwt.	Pollock, cwt.	Halibut, lbs.	Trout, lbs.	Shad, brls.	Smelts, lbs.	Alewives or Gaspereau, brls.	Bass, lbs.	Oysters, brls.	Clams, brls.			Fish oil, galls.	Fish as bait, brls.
Colchester County.																	
1	Sterling.						11000	1900	10000		300	11200	200			350	10,063 00
2	Stewiacke.																41,420 00
3	Five Islands.	3000	40	16	10	3500	2000							200	30		3,478 50
4	Economy.	1000	10	5	6	1500	5000	10						50	10		1,308 25
5	Little Bass River to Highland Village.						1000	11				250					3,862 00
6	Great Village to Queen's Village.							17									2,906 00
Totals.		4000	50	21	16	5000	19000	1938	10000	300	11450	200	800	250	40	350	
Values.		120	150	47	32	500	1900	19380	500	1200	1145	1000	1600	75	60	175	63,037 75

Return showing the Number, Tonnage and Value of Vessels, Boats, Nets, also the kinds of Fish in the County of Antigonish, Province of Nova Scotia, for the Year 1903.

Number.	DISTRICTS.										FISHING VESSELS AND BOATS.						FISHING GEAR OR MATERIALS.						KINDS OF FISH.					Lobster Canneries, No.	Number.
	Vessels.					Boats.					Gill Nets.			Trap Nets.			Trawls.			Salmon, fresh, lbs.	Herring, salted, brls.	Herring, fresh, lbs.	Mackerel, fresh, lbs.	Mackerel, salted, brls.					
	Number.	Tonnage.	Value.	Men.	Number.	Value.	Men.	Number.	Value.	Men.	Number.	Value.	Number.	Value.	Number.	Value.	Number.	Value.											
<i>Antigonish Co.</i>																													
1	Harbr Bouché, Linwood and Cape Jack	1	10	300	3	72	886	75	327	6309	1404	2	300	48	165	2500	465	198652	1300	295	1	2							
2	Tracadie, Bayfield Monk's Head and South Side Antigonish Harbour					54	787	53	127	2540	770	22	3700	16	63	19890	144		49812	110	2								
3	North Side Antigonish Har, Lakevale, and South Side Cape George					49	720	63	126	2584	665	12	1300	43	215	9100	125	8800	2000	78	3								
4	North Side of Cape George and Georgeville					21	231	31	48	964	182	1	100	21	88	1200	43	2200	900	14	4								
5	Malignant Cove, Doctor's Brook, Arisaig, Moidart and Knoidart					25	361	33	82	1714	405	5	750	24	100	6500	50		400	47	5								
Totals		1	10	300	3	221	2985	255	710	14111	3426	42	6150	152	631	39190	827	209652	54412	544									
Values.																7838	3721	2096	6529	8160									

SESSIONAL PAPER No. 22

Return showing the kinds and Quantities of Fish and Fish Products in the County of Antigonish, Province of Nova Scotia, for the Year 1903.

DISTRICTS.	KINDS OF FISH.																Fish Products.		TOTAL VALUE OF ALL FISH.	Number.		
	Lobsters, preserved in cans, lbs.	Cod, dried, cwt.	Haddock, fresh, lbs.	Haddock, dried, cwt.	Hake, dried, cwt.	Hake, sounds, lbs.	Pollock, cwt.	Trout, lbs.	Shad, brls.	Smelts, lbs.	Alwives or (raz- perea, brls.	Bass, lbs.	Eels, brls.	Oysters, brls.	Flounders, lbs.	Squid, brls.	Coarse and mixed fish, brls.	Fish oil, galls.			Fish as bait, brls.	Fish as manure, brls.
<i>Antigonish.</i>																						\$ cts.
1 Harbour Bouché, Linwood and Cape Jack.	12672	168	.....	.....	.....	.....	16	.....	.....	200	3	.....	14	.....	4660	3	130	419	297	430	22,018 52	1
2 Pracadie Bayfield Monk's Head and South Side Antigonish Harbour.	18672	150 1100	40	102	400	.....	200	.....	.....	8000	5	1000	36	108	3900	.....	14	285	206	222	20,269 44	2
3 North Side Antigonish Harbour, Lakevale and South Side Cape George.	55056	243 100	.....	241	480	.....	300	.....	.....	2000	25	.....	13	.....	10600	3	63	84	315	550	21,111 95	3
4 North Side of Cape George and Georgeville. Malignant Cove Doctor's Brook, Arisaig Moi- dart and Knoidart.	15072	39	.....	123	246	.....	.....	.....	.....	.....	1	400	.....	.....	1300	4	17	124	111	150	5,500 45	4
5	34560	36 100	.....	103	220	.....	100	.....	.....	.....	1	.....	.....	.....	1200	.....	23	100	187	350	12,046 25	5
Totals.	166032	636 1300	40	571 1346	16	600	2	10200	38	1400	63	108	630	540	650	40	512	304	1674	851	80,946 61	
Values.	41508 2862	39	120 1284	673	32	60	20	540	152	140	630	540	650	40	512	304	1674	851	80,946 61			

RETURN showing the Number, Tonnage and Value of Vessels, Boats, Nets, etc., also the Kinds of Fish in the Counties of Pictou and Hants, Province of Nova Scotia, for the year 1903.

[illegible]

Return showing the Kinds and Quantities of Fish and Fish Products in the Counties of Pictou and Hants, Province of Nova Scotia, for the year 1903—Continued.

Number.	District.	KINDS OF FISH.													Total Value of All Fish.	Number.		
		Cod, dried, cwt.	Haddock, fresh, lbs.	Haddock, dried, cwt.	Hake, dried, cwt.	Pollock, cwt.	Trout, lbs.	Shad, brls.	Smelts, lbs.	Alwives or Casperea, brls.	Bass, lbs.	Eels, brls.	Clams, brls.	Coarse and Mixed Fish, brls.			Fish as bait, brls.	Fish as manure, brls.
<i>Pictou County.</i>																		
1	West Pictou.....	45							5000	35		6	40	18	800	2500	65,560 50	1
2	Pictou Island.....															1500	38,802 00	2
3	Central Division.....	10	200	8		5	2000		20000	100		125					4,507 00	3
4	Southern Division.....	23					600			60						160	8,892 75	4
5	Merigonish Island.....	3							7100			15			100	150	5,841 50	5
6	North Beach.....						400					22			20	75	4,809 25	6
7	Ponds.....	14					400					6			100	250	8,505 25	7
8	Lismore.....						100								10	40	14,830 50	8
	Totals.....	95	200	8		5	3500		32100	195		174	40	18	1030	4675		
	Values.....	427	6	24		132	350		1605	780		1740	80	36	1545	2,337	138,401 75	
<i>Hants County.</i>																		
9	West Hants.....	42				6	2000	19	2150	32	250						1,085 50	9
10	Walton to Maitland.....						700			25							2,170 00	10
11	Maitland to Shubenacadie.....						400			240							2,200 00	11
12	Shubenacadie to Grand Lake.....						500			120							1,110 00	12
	Totals.....	42				6	3600	19	2150	417	250						6,565 50	
	Values.....	189				12	360	190	107	1668	25							

Number	FISHING VESSELS AND BOATS.				FISHING GEAR OR MATERIAL.						KINDS OF FISH.													
	Vessels.		Boats.		Gill Nets.			Seinees.			Lobster Canneries, No.	Salmon, fresh, lbs.			Salmon, preserved in cans, lbs.	Salmon, smoked, lbs.	Herring, salted, bbls.	Herring, fresh, lbs.	Mackerel, fresh, lbs.	Mackerel, salted, bbls.	Lobster, preserved in cans, lbs.	Lobster, fresh in shell, cwt.		
	Number.	Tonnage.	Value.	Men.	Number.	Value.	Fathoms.	Number.	Value.	Number.		Value.												
Guysboro' County.																								
1	Ecum Secum				45	800	50		300	1	80				250			80	600	400	10	9312	40	1
2	Marie Joseph				50	1200	45		350						50			50	1000	500	10	17376	125	2
3	Liscomb Spanish Ship																							
4	Bay & Cleggin				118	2700	100		600	1	50				2000	50	100	100	2000	600	10	33744	112	3
5	St. Mary's Bay and River				35	650	30		700						9000	100	300	40	800	800	5	16464	20	4
6	Wine Harbour				25	600	32		400	2	120				500		100	120	2000	1000	12			5
7	Port Helford & Indian Lake				45	700	50		600						1200		400	200	1500	800	15			6
8	Holland's Harbour & Indian River				20	300	22		180						75			50	3000	1500	45			7
9	Port Beckerton	3	73	2000	22				750						150			200	4000	3000	100	21120	50	8
10	Fisherman's Harbour				32	900	40		400						100			230	5000	500	60	24960	4	9
11	Country Harbour				12	150	15		200						2000			60	1000		3			10
12	Isaac Harbour				30	700	32		500						1400			100	2000	250	25			11
13	Drum Head				60	1800	45		750	1	50				200			350	10000	3000	120			12
14	Seal Harbour	1	18	300	7				600	1	60				300			120	4000	1000	30	25776	285	13
15	Coddle's Harbour				32	800	35		500	1	50				500			60	1000	500	25			14
16	New Harbour	1	17	600	7				1500	2	120							500	2000	3000	200	6760	800	15
17	Tor Bay	1	13	1000	3				2300									50			60	18000		16
18	Larry's River	7	129	5800	33				8000									400			390			17
19	Charles Cove	2	22	1000	10				4500									310			160	36912	8	18
20	Cole Harbour				20	1200	21		2100	2	200	1	500		600			80			95			19
21	Port Felix	4	75	3900	22				9000	2	25	1	500					400		10670	225	31104		20
22	Whithead	5	71	4100	25				7000	4	48	2	1000		800	100		300	25600	20400	190	57600	339	21
23	Raspberry & Dover	1	12	900	5				1650	2	200	2	800		300		40	6500	100000	32	58452	341	22	

SESSIONAL PAPER No. 22

23 Canso & Canso Tittle	18	381	25200	105	150	8000	140	750	15000	7500	2	500	11	5500	4	12000	1800	1500	650900	1450000	4000	88848	1060	23
24 Fox Island Maine					20	600	14	140	2800	1400			5	2500		1000		30	6000	89250	100			24
25 Half Island Cove					60	2400	55	750	15000	7500	2	700	7	3500		500		170	59550	500000	2800			25
26 Philip's Harbour					40	1200	30	350	7000	3500	1	500						100	34450	193100	900			26
27 Queensport					60	1800	65	600	12000	6000	3	800	8	4000	2	1500		140	56850	170770	1000	58560	103	27
28 Peas Brook	1	28	1500	5	30	1050	40	310	6200	3100			1	800				70	20800	90000	320			28
29 Halfway Cove					70	2100	75	600	12080	6000	1	300	3	1800				80	26550	27500	1500			29
30 Sandy Cove & Cook's Cove	1	13	600	5	60	1800	70	615	13090	6545			3	1500		9190		100	28106	32350	1800			30
31 Guysboro, & Manches-ter	1	11	800	4	25	500	28	330	7655	4000	1	200	1	1000		5330		50	12950	15230	460			31
32 Port Shoreham					40	800	45	360	7320	3660						400		100	10000	19150	600			32
33 St. Francis					50	1000	60	600	12000	6000								160	5550	46000	1640			33
34 Oyster Ponds					45	900	55	500	10000	5000								170	4900	96850	1970			34
35 Sand Point					35	750	46	400	8000	4000								190	18950	90750	1500			35
36 Steep Creek	1	21	1000	3	60	1800	60	1100	22000	11000	2	500						400	145300	15550	4240			36
37 Mulgrave and Auld's Cove	2	63	1350	9	15	300	15	300	6000	3600					2			150	48600	46694	410	38208	186	37
Totals	49	947	50050	265	1893	69640	1956	12430	252395	121685	31	4503	45	23400	28	49345	2050	7350	1201400	3031114	25062	543196	2673	
Values																9869	307	180	33075	12014	363733	375930	135799	18711

Number.	DISTRICTS.	KINDS OF FISH.												FISH PRODUCTS.				TOTAL VALUE OF ALL FISH.	Number.						
		Cod, dried, cwt.	Cod, tongues and sounds, brls.	Haddock, fresh, lbs.	Haddock, dried, cwt.	Haddock, smoked finnan haddies, lbs.	Hake, dried, cwt.	Hake, sounds, lbs.	Pollock, cwt.	Halibut, lbs.	Trout, lbs.	Smelts, lbs.	Alewives or gaspereau, brls.	Eels, brls.	Flounders, lbs.	Tom cod or frost fish, lbs.	Squid, brls.			Coarse and mixed fish, brls.	Fish oil, galls.	Fish as bait, brls.	Fish as manure, brls.	Seal skins, number.	Clams, brls.
Guysborough County-- Continued.																									
1	Ecum Secum.....	200	....	500	30	....	....	....	35	1500	1200	300	16	20	900	800	3	25	250	200	100	10	10	5,416 50	1
2	Marie Joseph.....	275	..	400	45	....	....	....	65	1600	200	200	5	30	1000	600	5	20	300	220	176	6	...	8,322 00	2
3	Liscomb, Spanish Ship Bay & Groggin	450	....	300	50	....	....	....	80	1500	800	600	30	15	2000	1000	6	50	600	300	350	10	12	14,269 00	3
4	St. Mary's Bay and River.....	30	....	200	10	....	....	....	5	300	6000	400	60	20	1000	500	1	10	100	150	170	4	16	8,277 00	4
5	Wine Harbour.....	75	..	400	15	....	....	....	10	500	200	....	5	5	800	300	1	5	80	100	...	...	10	1,775 50	5
6	Port Hilford & Indian Lake.....	80	..	600	12	....	....	....	12	600	800	1500	12	4	500	600	1	6	80	120	...	...	...	2,550 00	6
7	Holland's Harbour & Indian River	30	....	1000	10	....	....	....	10	600	2000	....	3	4	800	500	2	4	40	130	...	3	8	1,933 75	7
8	Port Beckerton.....	700	....	18000	40	....	....	....	120	2500	....	....	5	40	1200	1000	5	20	800	200	200	10	10	13,978 50	8
9	Fisherman's Harbour	160	....	4000	20	....	....	....	40	800	....	....	4	10	800	600	4	10	200	120	270	4	4	9,975 00	9
10	Country Harbour	10	....	300	2	....	....	....	5	400	2000	....	10	8	200	200	....	....	20	20	...	6	...	1,210 50	10
11	Isaac's Harbour.....	100	....	3000	18	....	....	....	30	1200	1000	....	4	6	800	600	3	15	100	150	...	5	3	2,456 25	11
12	Drum Head.....	800	20	50000	60	....	....	....	220	4000	....	....	10	4	1000	2000	20	40	900	200	...	6	5	12,712 50	12
13	Seal Harbour.....	500	15	15000	35	....	....	....	200	4000	500	....	5	6	500	1500	10	30	550	150	260	2	3	14,222 50	13
14	Coddle's Harbour.....	220	5	8000	40	....	....	....	100	1000	300	....	4	20	500	1200	6	10	300	100	...	...	4	3,004 00	14
15	New Harbour.	800	30	25000	100	....	....	....	600	5000	1200	5000	30	25	1000	2000	10	30	1200	150	70	...	...	15,620 00	15
16	Tor Bay.....	562	....	....	113	....	....	....	143	1790	....	....	5	....	....	....	10	40	600	150	195	...	...	9,600 50	16
17	Larry's River.....	1233	....	....	231	....	15	....	558	3950	300	500	37	40	....	....	160	110	1500	540	70	...	...	18,634 25	17
18	Charles Cove.....	1910	....	....	380	....	138	100	466	3185	400	400	27	40	....	....	60	40	2100	480	400	...	...	26,863 00	18
19	Cole Harbour.....	865	....	....	198	....	5	....	132	525	650	....	40	15	....	....	45	15	300	180	65	...	...	7,876 75	19
20	Port Felix.....	4557	....	19600	700	....	96	80	644	1657	900	860	90	45	....	....	100	30	3000	675	400	...	...	42,651 10	20
21	Whitehead	2565	....	30000	800	6000	120	100	1239	4320	500	1000	68	....	....	....	295	40	2800	1100	650	...	...	46,731 50	21
22	Rasberry & Dover	760	....	10330	50	....	....	....	240	....	....	....	4	30	....	....	95	10	1800	240	500	...	6	36,022 90	22

SESSIONAL PAPER No. 22

23	Canso & Canso Tittle.	18810	195	2950000	2000	230000	350	400	19151	175138	1500	1200	115	10	20000	4800	200	46000	8000	650	15	578,384	30	23	
24	Fox Island (Main).	100	...	11100	20	...	10	...	45	250	...	...	...	...	...	400	10	200	80	900	...	15,835	50	24
25	Half Island Cove.	1900	...	37900	100	40000	16	...	90	...	...	...	10	...	...	575	20	1550	400	80	...	119,548	00	25
26	Philips Harbour.	640	...	15600	50	...	11	...	20	...	...	...	6	...	...	100	15	950	200	90	...	42,113	75	26
27	Queensport.	760	...	72000	200	...	112	100	23	...	...	...	18	...	...	900	20	2000	300	700	...	63,991	40	27
28	Peas Brook.	432	...	20700	90	...	50	25	20	...	...	...	1	...	...	40	25	300	200	90	...	19,772	00	28
29	Half Way Cove.	580	...	39000	300	...	100	...	...	...	200	...	10	...	...	200	30	500	400	100	...	31,998	00	29
30	Sandy Cove & Cook's Cove.	140	...	24200	100	...	82	80	159	...	...	...	16	20	...	120	10	200	300	40	...	36,943	50	30
31	Guysborough & Manchester.	130	...	6300	20	...	28	40	...	...	800	5000	12	20	...	95	25	200	160	12	...	12,379	60	31
32	Port Shoreham (Ragged Head).	100	...	5930	50	...	11	...	30	...	...	...	...	8	...	10	...	100	200	20	...	13,277	65	32
33	St. Francis Harbour.	95	...	4050	40	...	10	...	12	...	...	...	17	7	...	5	10	110	275	...	...	32,234	00	33
34	Oyster Ponds.	114	...	2950	29	...	15	...	10	...	...	...	60	8	...	4	...	120	250	10	...	43,489	25	34
35	Sand Point.	65	...	6000	21	...	30	...	15	...	...	...	15	...	...	10	...	60	210	20	...	35,520	00	35
36	Steep Creek.	50	...	...	20	...	12	...	5	...	...	...	4	...	...	6	...	70	180	12	...	69,378	00	36
37	Mulgrave & Auld's Cove.	72	...	12300	10	35000	10	...	220	...	...	...	6	25	...	400	...	90	100	380	...	29,294	78	37
Totals.		40870	265	3359560	6018	311000	1221	925	24754	232315	21450	16960	764	485	33000	8507	925	70670	16930	6980	66	106	...	...
Values.		\$ 183915	2650	100786	18054	18660	2747	462	49508	23231	2145	848	3056	4850	990	402	34028	1850	21201	25395	3490	82	312	1,448,253	73

4-5 EDWARD VII., A. 1905

RETURN showing the Fishing Materials and the Quantity and Value of Fish, &c.—Nova Scotia *Con.*

Number.	DISTRICTS.	FISHING VESSELS AND BOATS.				FISHING GEAR OR MATERIALS.							KINDS OF FISH.						Number.				
		Vessels.		Boats.		Gill Nets.			Seines.		Trawls.		Salmon, fresh, lbs.	Salmon, smoked, lbs.	Herring, salted, bbls.	Herring, fresh, lbs.	Mackerel, fresh, lbs.	Mackerel, salted, bbls.		Lobsters, preserved in cans, lbs.			
		Number.	Tonnage.	Value.	Men.	Number.	Value.	Men.	Number.	Fathoms.	Value.	Number.									Value.		
Halifax County.																							
1	North Shore.....	1	60	2000	20	160	3200	320	2020	42000	10400	87	26100	200	1000	500	100	200	10000	230000	800	200	1
2	East St. Margarets.....	2	138	3500	29	110	2200	240	2018	41800	10600	40	12000	300	1500	700	200	300	8000	30000	200	300	2
3	Indian Harbour.....	2	25	1700	12	340	10200	340	1510	31000	7700	20	6000	150	750	1000		300	2000	30000	100	300	3
4	Peggy's Cove.....	1	30	400	5	50	2500	90	415	9500	2250	9	2700	25	125	600		90	1500	20000	50	90	4
5	Dover.....	3	47	1200	17	319	6200	190	1020	22000	5400	74	18000	300	1500	3500	300	500	12000	240000	200	500	5
6	Prospect.....	2	68	1000	11	60	1900	89	520	12000	2900	40	12000	150	750	1000		400	5000	150000	100	400	6
7	Terrence Bay.....	4	54	1600	20	170	3000	200	510	11000	2900	14	4200	130	650	600		400	3000	150000	50	400	7
8	Pennant.....	6	109	3000	32	20	400	40	135	3500	825	8	2400	25	125	1000		100	4000	100000	20	100	8
9	Sambro.....	5	80	3200	30	60	1500	110	515	13000	2800	9	2700	100	500	1000		200	14000	120000	60	200	9
10	Ketch Harbour.....	2	65	800	14	65	1000	111	306	6600	1620	14	4200	39	195	300		50	8000	100000	40	50	10
11	Portuguese Cove.....	1	26	500	6	48	960	86	385	8500	2075	19	6000	40	200	700		75	9000	120000	90	75	11
12	Herring Cove.....	5	125	2500	39	57	1140	72	112	3200	740	25	2700	90	450	900		150	11000	160000	100	150	12
13	Ferguson's Cove.....	2	80	500	9	25	500	39	91	3800	620	19	6000	15	75	400		40	1000	15000	70	40	13
14	Bedford.....					17	200	19	20	400	100	4	1200	5	25	500		40	300	50000		40	14
15	Halifax.....					21	250	26	30	600	150	5	1500	3	15	500	400	50	700	100000		50	15
16	Eastern Passage and Devil's Island.....					72	1340	42	260	15600	1090					260		38	9000	12000	19	38	16
17	Cow Bay and Lawrence town.....					20	400	15	80	4800	350					530		13	900	1000	5	13	17
18	Seaforth and Threefathom Harbour.....					29	320	17	85	5100	350					325		25	750	800	8	25	18
19	West Chezetcook.....	4	196	5300	53	122	1200	41	347	20820	1500							280			27	280	19
20	East Chezetcook.....					40	397	24	80	4800	330							15		200		15	20
21	Petpeswick Harbour.....					40	635	33	60	3600	240							140	600	100	5	140	21
22	Musquodoboit Harbour.....	1	15	400	3	55	1120	43	105	6300	440					1500	338	31	400	160	14	31	22
23	Jeddore.....	2	47	1000	14	70	1100	56	172	10320	675	1	35			170		168			8	168	23
24	Clam Harbr and Owl's Head.....	3	40	500	11	72	1600	60	271	16260	1084	3	550			185	77	425	500	200	24	425	24
25	West Ship Harbour.....	2	29	450	8	24	450	15	92	5520	378							18			28	18	25

SESSIONAL PAPER No. 22

26	East Ship Harbour.....	1	23	300	5	20	380	24	63	1260	189	.....	.....	1	12	.....	.....	51	.....	5	.....	26
27	Pleasant Harb'r and Tangier.	2	29	500	8	48	1486	53	216	4320	648	.....	.....	5	64	.....	.....	556	.....	59	.....	27
28	Pope's Harbour and Gennards Island.....					37	955	38	175	3500	525	1	60			1	.....	501	.....	40	28032	28
29	Spy Bay Taylors Head and Mushaboon.....	2	73	900	15	76	2361	72	594	11880	1782	.....	.....	2	19	2	.....	1341	.....	198	56160	29
30	Sheet Harbour and Sober Island.....	2	35	1000	10	48	1876	53	189	3780	100	3	901	8	80	1	600	200	284	42	20640	30
31	Beaver Harbour and Port Dufferin.....					8	182	10	35	700	108	1	20	2	3	2	.....	27	.....	23	41808	31
32	Quoddy and Harrigan Cove.					9	130	15	6	120	18	.....	.....			2	.....	2	.....	1	98736	32
33	Moser River and Smith's Cove	2	27	1100	8	10	130	4	8	160	24	.....	.....	7	26		100	8	.....	3	.....	33
34	Mitchell's Bay and Ecum Secum.....					28	452	29	50	1000	1500	5	230			2	.....	59	.....	2	62448	34
	Totals.....	57	1421	33350	379	2350	51664	2616	12495	328740	62411	401	109496	1597	8064	20	17070	1615	6877	101650	2393	432624	
	Values.....\$																3414	323	30946	1016		35895	108156

RETURN showing the Kinds and Quantities of Fish and Fish Products in the County of Halifax, Province of Nova Scotia,
for the Year 1903.

Number.	DISTRICTS.	KINDS OF FISH.											FISH PRODUCT.				TOTAL VALUE OF ALL FISH	Number.						
		Lobsters fresh in shell, cwt.	Cod, dried, cwt.	Cod, tongues and sounds, brls.	Haddock, fresh, lbs.	Haddock, dried, cwt.	Hake, dried, cwt.	Hake, sounds, lbs.	Pollock, cwt.	Halibut, lbs.	Trout, lbs.	Smelts, lbs.	Alewives or Casperea, brls.	Eels, brls.	Flounders, lbs.	Tom cod or frost fish, lbs.			Squid, brls.	Coarse and mixed fish, brls.	Fish oil, galls.	Fish as bait, brls.	Fish as manure, brls.	Seal skins, number.	Clams, brls.
1	Halifax Co.																							
1	North Shore.....	190	700	1	...	20	200	100	300	300	2000	...	60	8	60000	1000	90	80	1000	90	20	2	40	49,797 50
3	East St. Margaret's ..	160	1500	5	...	40	500	300	300	1000	1500	...	30	25	15000	1000	70	20	1300	100	90	5	50	20,236 25
3	Indian Harbour.....	100	1000	4	...	30	300	150	150	200	50	...	25	5	6000	1200	75	30	600	75	...	...	...	14,093 50
3	Peggy's Cove	75	75	1	...	10	30	10	75	...	30	...	10	...	4000	1000	30	...	100	10	...	...	2	5,177 00
4	Dover.....	425	1200	3	...	50	100	75	100	...	200	...	95	6	9000	1200	60	25	500	100	...	...	60	45,423 50
6	Prospect.....	400	1000	6	...	20	100	75	100	500	100	...	15	3	6000	1500	30	10	400	75	...	...	5	30,190 00
7	Terrance Bay.....	600	700	3	...	40	90	75	75	500	600	...	75	20	16000	1600	40	5	500	90	250	...	20	35,364 00
8	Pennant	200	600	...	...	40	40	15	50	700	500	...	80	5	6000	1000	10	...	400	40	...	...	5	18,337 50
9	Sambro.....	600	1000	6	22000	10	200	15	30	2000	1000	...	20	6	8000	1000	25	7	1000	80	...	...	6	38,563 50
10	Ketch Harbour.....	600	300	...	10000	...	20	10	30	200	50	...	100	...	5000	500	6	...	200	20	450	...	...	19,854 00
11	Portuguese Cove.....	700	100	...	10000	...	50	30	60	300	60	...	20	...	7000	6000	9	...	50	30	...	...	...	22,817 00
12	Herring Cove.....	500	600	...	12000	...	75	50	50	600	75	...	25	...	500	7000	30	...	300	60	...	...	...	29,211 25
13	Ferguson's Cove.....	400	50	...	5000	...	25	15	10	...	25	...	5	...	800	600	2	...	25	5	...	...	...	6,466 25
14	Bedford.....	200	10	...	1000	...	25	15	20	...	200	...	4	...	4000	400	1	...	18	10	...	...	...	7,054 15
15	Halifax.....	90	25	...	2000	...	...	...	...	...	1000	...	6	...	5000	500	2	...	10	...	...	...	...	13,514 50
16	Eastern Passage and Devil's Island.....	75	280	1	40000	...	...	...	82	5770	...	...	14	5	6500	...	...	...	125	70	...	...	28	6,273 50
17	Cow Bay and Lau- rencetown.....	...	30	...	700	7	...	...	6	...	600	...	23	3	5000	...	...	...	10	7	...	...	20	943 00
18	Seaforth and Three Fathom Harbour...	152	84	...	300	14	...	...	9	265	200	11000	20	5	7000	...	...	...	28	6	30	...	28	3,729 20
19	West Chezetcook. ....	...	2298	2	...	301	...	...	47	9880	...	3500	33	7	6000	...	...	...	940	138	...	...	488	16,033 00
20	East Chezetcook.....	...	128	...	...	38	...	...	22	315	...	1000	10	5	9000	...	...	...	47	17	...	...	232	1,800 60
21	Petpeswick Harbour...	338	232	...	1000	54	...	...	52	910	600	800	6	10	5000	...	...	...	71	20	200	...	43	8,647 30
22	Musquodoboit Harb'r.	...	577	...	2000	63	5	...	57	3373	1500	10000	...	7	6000	...	...	...	170	20	...	...	60	5,149 35

SESSIONAL PAPER No. 22

23 Jeddore.....	414	1644	2	2500	118	5	4	68	1880	400	2110	2	7	9000	.....	.....	520	126	225	.....	90	18,715	25	23
24 Clam Harbour and Owl's Head.	657	482	.....	800	.....	.....	.....	62	5583	350	1400	2	3	16000	.....	.....	210	47	220	.....	60	16,298	70	24
25 West Ship Harbour.....	.....	123	.....	500	21	.....	.....	17	392	200	600	60	3	4000	.....	.....	50	11	.....	.....	5	1,687	20	25
26 East Ship Harbour..	.....	235	.....	.....	32	.....	.....	68	1620	.....	.....	.....	.....	.....	.....	5	149	11	.....	.....	6	1,839	20	26
27 Pleasant Harbour and Tangier.....	.....	880	.....	.....	75	17	22	802	4115	.....	.....	.....	.....	.....	.....	10	575	30	.....	.....	8	9,930	25	27
28 Pope's Harbour and Gerrard's Island.....	.....	375	.....	.....	24	3	.....	90	1648	.....	.....	.....	.....	.....	.....	15	443	14	300	40	5	12,367	70	28
29 Spry Bay, Taylor's Head & Mushaboon.	800	935	.....	.....	70	10	..	102	2700	.....	.....	.....	5	.....	.....	.....	645	33	500	.....	9	34,119	50	29
30 Sheet Harbour and Sober Island	181	720	.....	.....	64	55	40	110	4583	.....	.....	.....	18	.....	.....	.....	280	20	200	.....	6	13,155	05	30
31 Beaver Harbour and Port Bufferin	579	105	.....	.....	8	2	..	40	928	.....	.....	.....	.....	.....	.....	.....	43	4	400	27	2	15,901	95	31
32 Quoddy and Harrigan Cove	858	189	.....	.....	12	.....	.....	12	700	.....	.....	.....	12	.....	.....	.....	50	4	1000	.....	5	32,315	50	32
33 Moser River and Smith's Cove. ....	.....	125	.....	.....	13	.....	.....	10	650	.....	.....	.....	.....	.....	.....	.....	24	5	.....	.....	2	806	20	33
34 Mitchell's Bay and Peum Secum..	269	220	.....	.....	35	.....	.....	20	2500	.....	.....	.....	.....	.....	.....	.....	59	4	600	.....	3	19,505	20	34
Totals.....	9563	18522	34	109800	1209	1852	1001	3026	54115	11240	30410	740	168	225800	25500	480	10842	1372	4485	74	1288	.....	.....	.....
Values..... \$	66941	83349	340	3294	3627	4167	500	6052	5411	1124	1520	2960	1680	6774	765	1920	3252	2058	2242	92	2576	.....	576,347	55

RECAPITULATION

Of Yield and Value of the Fisheries in District No. 2, Nova Scotia with Comparative Statements of the increase or decrease for the Years 1902 and 1903.

Kinds.	Quantity in 1903.	Rate.	Totals.	QUANTITIES	
				Increase.	Decrease.
		\$ cts.	\$ cts.		
Salmon, fresh..... Lbs.	307,815	0 20	61,563 00	13,084	
" preserved in cans..... "	2,050	0 15	308 00	460	
" smoked..... "	3,015	0 20	603 00		5,730
Herring, salted..... Brls.	15,848	4 50	71,376 00	6,097	
" fresh..... Lbs.	1,726,002	0 01	17,260 00	693,337	
" smoked..... "	141,000	0 02	2,820 00		8,000
Mackerel, fresh..... "	4,741,686	0 12	569,002 00	2,847,010	
" salted..... Brls.	28,019	15 00	420,285 00	23,967	
Lobsters, preserved in cans..... Lbs.	2,085,484	00 25	521,371 00	53,030	
" fresh in shell..... Cwt.	12,551	7 00	88,857 00		2,374
Cod, dried..... "	61,305	4 50	275,872 00	770	
" tongues and sounds..... Brls.	299	10 00	2,990 00	148	
Haddock, fresh..... Lbs.	3,486,180	0 03	104,586 00	972,055	
" dried..... Cwt.	7,984	3 00	23,952 00		1,499
" smoked finnan haddies..... Lbs.	311,000	0 06	18,660 00		63,200
Hake, dried..... Cwt.	4,544	2 25	10,224 00		3,787
" sounds..... Lbs.	3,272	0 50	1,636 00		808
Pollock..... Cwt.	28,614	2 00	57,228 00	7,175	
Halibut..... Lbs.	304,780	0 10	30,478 00		280,421
Trout..... "	60,690	0 10	6,069 00	1,265	
Shad..... Brls.	2,115	10 00	21,150 00	1,167	
Smelts..... Lbs.	222,420	0 05	11,121 00	96,790	
Alewives or gaspareau..... Brls.	3,317	4 00	13,268 00		225
Bass..... Lbs.	13,400	0 10	1,340 00	1,575	
Eels..... Brls.	955	10 00	9,550 00		18
Oysters in shell..... "	1,037	5 00	5,185 00		282
Clams..... "	2,277	2 00	4,554 00		369
Flounders..... Lbs.	282,960	0 03	8,489 00	134,160	
Tom cod..... "	44,400	0 03	1,332 00		7,850
Squid..... Brls.	8,997	4 00	35,988 00		9,217
Coarse or mixed fish..... "	2,460	2 00	4,920 00		177
Fish oil..... Galls.	82,944	0 30	24,883 00	5,514	
Fish used as bait..... Brls.	26,388	1 50	39,582 00	1,446	
" products used as manure..... "	22,992	0 50	11,496 00		11,656
Seal skins..... No.	140	1 25	175 00	29	
Total, 1903.....			2,477,113 00		
" 1902.....			1,698,208 00		
Increase.....			878,905 00		

SESSIONAL PAPER No. 22

RECAPITULATION

SHOWING the Number and Value of Fishing Vessels, Boats, &c., in the District No. 2, Province of **Nova Scotia** for the Year 1903.

Material.	Value.	Total.
	\$	\$
109 vessels, 2,409 tons.....	84,300	
5,308 boats.....	142,205	
26,987 gill nets, 652,680 fathoms.....	204,022	
434 seines, 48,633 fathoms.....	114,024	
108 trap nets.....	32,300	
3,762 trawls.....	25,073	
13 weirs.....	1,605	
103 smelt nets.....	2,405	
9,994 hand lines.....	5,956	
		611,890
115 lobster canneries.....	104,795	
273,436 lobster traps.....	166,559	
		271,349
50 freezers and ice houses.....	40,625	
1,755 smoke and fish-houses.....	104,244	
919 wharfs and piers.....	115,004	
35 fishing smacks, tugs and steamers.....	34,855	
		294,728
Totals.....		1,177,967

COMPARATIVE STATEMENT of the Value of the Fisheries in each County of District No. 2, **Nova Scotia**, for the Years 1902 and 1903.

County.	Value in 1902.	Value in 1903.	Increase.	Decrease.
	\$	\$	\$	\$
Antigonish.....	63,786	80,947	17,161	
Colchester.....	46,232	60,038	16,806	
Cumberland.....	131,161	163,560	32,399	
Guysborough.....	651,258	1,448,254	796,996	
Halifax.....	585,182	576,347		8,835
Hants.....	7,870	6,565		1,305
Pictou.....	112,719	138,401	25,682	
Totals.....	1,598,208	2,477,112	889,044	10,140
		1,598,208	10,140	
Net increase.....		878,904	878,904	

DISTRICTS.	KINDS OF FISH AND FISH PRODUCTS.																		TOTAL VALUE OF ALL FISH.	Number.						
	Lobsters, fresh in shell, cwt.	Cod, dried, cwt.	Cod, tongues and sounds, brls.	Haddock, fresh, lbs.	Haddock, dried, cwt.	Haddock, smoked fin- nan haddies, lbs.	Hake, dried, cwt.	Hake, sounds, lbs.	Pollock, cwt	Halibut, lbs.	Trout, lbs.	Smelts, lbs.	Alewives or gaspereau, brls.	Eels, brls.	Flounders, lbs.	Tom cod or frost fish, lbs.	Squid, brls.	Coarse and mixed fish, brls.			Fish oil, galls.	Fish as bait, brls.	Fish as manure, brls.	Clams, brls.		
<i>Lunenburg County.</i>																										
1 Fox Point	8	400	...	...	...	150	40	55	...	...	25	...	...	5	30000	100	40	700	150	400	30	...	...	1
2 Mill Cove	6	200	2	...	...	30	...	20	...	10	30	...	...	4	30000	100	42	1000	100	450	30	...	...	2
3 Lodge & North-west Cove	14	120	...	...	...	45	...	25	...	7	...	...	...	5	27000	...	20	80	60	80	...	...	...	3
4 Aspotogan	10	20	...	...	...	20	...	15	...	...	...	...	...	...	11200	...	12	42	25	45	...	1	...	4
5 Bayswater & Blandford..	16	315	...	200	...	65	...	75	...	...	50	...	...	...	30000	180	110	220	65	190	...	4	...	5
6 Little and Big Tanecook..	94	2300	...	600	...	200	...	150	...	...	2000	...	...	...	51000	...	35	900	650	1800	400	...	...	6
7 Deep Cove.	5	500	...	...	...	10	...	4	...	...	...	...	...	...	17000	...	10	100	30	12	35	...	...	7
8 Chester.	400	1000	8	1500	...	35	40	12	500	700	3000	50	10	45000	1450	20	200	150	200	15	16	...	8	
9 Mahone Bay and Mar- tin's River	14	30000	50	1400	...	200	150	160	25000	150	1500	20	11	10000	600	30	100	10000	800	6	...	9
10 Lunenburg Harbour to Kingsbury	265	66833	60	4000	375	110000	8	...	2000	42000	10
11 La Have River District..	180	57770	55	2500	...	100	...	95	...	10	6500	...	6000	10	15	...	500	30500	11
12 Petite Riviere to Port Medway	110	5270	7	500	80	1050	...	500	...	5	...	700	3000	12
Totals	1122	164728	182	10700	7425	1900	1815	230	1066	145175	955	11000	97	63	251200	5630	319	3342	86730	3977	510	27	
Values	\$ 11220	741276	1820	321	22275	114	4084	115	2132	14517	96	550	388	630	7536	169	1276	6684	26019	5966	255	216	

RETURN showing the Number and Value of Vessels and Boats, &c., and the Quantity and Value of Fish, in the County of Queen's, Province of Nova Scotia, for the Year 1903.

Number.	DISTRICTS.	FISHING VESSELS AND BOATS.						FISHING GEAR OR MATERIAL.				LOBSTER.				
		Vessels.			Boats.			Gill Nets.		Hand Lines.	Canneries.					
		Number.	Tonnage.	Value.	Men.	Number.	Value.	Men.	Number.	Value.	Number.	Value.				
<i>Queen's County.</i>																
1	Port Medway	2	124	7200	23	83	2800	206	255	4950	2208	200	120	.....	1	.....
2	Mill Village. . . . .				.....	21	155	28	32	675	125			.....	2	.....
3	Greenfield. . . . .				.....	12	140	28	100	50	50			.....	3	.....
4	Liverpool Brooklyn and Gull Island	1	18	200	5	29	475	45	70	1392	358	60	30	.....	4	.....
5	Western Head Black Point and Moose Harbour. . . . .				.....	75	1545	70	328	6560	1640	160	80	.....	5	.....
6	White and Hunts Pt. and Summerville.	1	15	225	4	44	750	44	140	2804	700	130	55	.....	6	.....
7	Port Mouton.	3	37	600	11	90	1500	75	182	3640	910	200	100	.....	7	.....
8	Port Joli and Port Hebert. . . . .				.....	60	1200	29	120	2400	600	120	60	.....	8	.....
9	Eagle Head and Beach Meadows. . . . .				.....	25	297	32	34	680	170	46	23	.....	9	.....
10	Berlin, Milton and Kempt. . . . .				.....	54	850	37	100	2000	500	74	37	.....	10	.....
Totals.		7	194	8225	43	493	9712	594	1361	25151	7261	990	595	.....	9	2900

RETURN showing the Kinds and Quantities of Fish and Fish Products in the County of Queen's, Province of Nova Scotia, for the Year 1903.

Number.	KINDS OF FISH AND FISH PRODUCTS.												Total Value of All Fish.	Number.					
	Salmon, fresh, lbs.	Salmon, smoked, lbs.	Herring, salted, brls.	Mackerel, fresh, lbs.	Mackerel, salted, brls.	LOBSTERS, PRESERVED in cans, lbs.	LOBSTERS, FRESH IN SHELL, cwt.	Cod, dried, cwt.	Haddock, dried, cwt.	Pollock, cwt.	Halibut, lbs.	Trout, lbs.			Shad, brls.	Smelts, lbs.	Alwives or (cas- pereau, brls.	Fels, brls.	Fish Oil, galls.
Queen's County.																			
1	Port Medway.	5750	490	385	7			2650	46	37		2975	16	5375	465	36	1940	18,293 25	1
2	Mill Village.	8545	1350									3950		2250	1037	12		6,817 00	2
3	Greenfield.	1765	375												885	11		4,473 00	3
4	Liverpool, Brooklyn and Gull Islands.	1200		25	6000		100	40		20	250							2,317 50	4
5	Western Head, Black Pt. and Moose Harbour.						190	100	20	10	300							12,585 00	5
6	White and Hunts Pt. and Summerville.						150	89	10	9	200						15	7,415 00	6
7	Port Mouton.			225		30	250	225	17	20	400						50	29,121 00	7
8	Port Joli and Port Hebert.			5		30	300	175	20	22	100				20	24	40	9,556 00	8
9	Eagle Head and Beach Meadows.	200					200	125	10	20							30	12,281 50	9
10	Berlin, Milton and Kempt.	1600				18400	120	80	9	10		2000			19			6,803 00	10
Totals.		19060	2215	640	6000	742	1310	3484	132	148	1250	8925	16	7625	2426	83	2075		
Values.		\$ 3812	443	2880	720	11130	13100	15678	396	296	125	893	160	381	9704	830	622	109,662 25	

RETURN showing the Number, Tonnage and Value of Vessels and Boats, Nets, &c., and the Kinds of Fish in the County of Shelburne, Province of Nova Scotia, for the Year 1903.

FISHING VESSELS AND BOATS.				FISHING GEAR OR MATERIALS.				KINDS OF FISH.											
DISTRICTS.				Boats.				Trap Nets.				Trawls.				No. of Lobster Canneries.			
Vessels.				Gill Nets.				Trap Nets.				Trawls.				No. of Lobster Canneries.			
Vessels.				Gill Nets.				Trap Nets.				Trawls.				No. of Lobster Canneries.			
Vessels.				Gill Nets.				Trap Nets.				Trawls.				No. of Lobster Canneries.			
Vessels.				Gill Nets.				Trap Nets.				Trawls.				No. of Lobster Canneries.			
Vessels.				Gill Nets.				Trap Nets.				Trawls.				No. of Lobster Canneries.			
Vessels.				Gill Nets.				Trap Nets.				Trawls.				No. of Lobster Canneries.			
Vessels.				Gill Nets.				Trap Nets.				Trawls.				No. of Lobster Canneries.			
Vessels.				Gill Nets.				Trap Nets.				Trawls.				No. of Lobster Canneries.			
Vessels.				Gill Nets.				Trap Nets.				Trawls.				No. of Lobster Canneries.			
Vessels.				Gill Nets.				Trap Nets.				Trawls.				No. of Lobster Canneries.			
Vessels.				Gill Nets.				Trap Nets.				Trawls.				No. of Lobster Canneries.			
Vessels.				Gill Nets.				Trap Nets.				Trawls.				No. of Lobster Canneries.			
Vessels.				Gill Nets.				Trap Nets.				Trawls.				No. of Lobster Canneries.			
Vessels.				Gill Nets.				Trap Nets.				Trawls.				No. of Lobster Canneries.			
Vessels.				Gill Nets.				Trap Nets.				Trawls.				No. of Lobster Canneries.			
Vessels.				Gill Nets.				Trap Nets.				Trawls.				No. of Lobster Canneries.			
Vessels.				Gill Nets.				Trap Nets.				Trawls.				No. of Lobster Canneries.			
Vessels.				Gill Nets.				Trap Nets.				Trawls.				No. of Lobster Canneries.			
Vessels.				Gill Nets.				Trap Nets.				Trawls.				No. of Lobster Canneries.			
Vessels.				Gill Nets.				Trap Nets.				Trawls.				No. of Lobster Canneries.			
Vessels.				Gill Nets.				Trap Nets.				Trawls.				No. of Lobster Canneries.			
Vessels.				Gill Nets.				Trap Nets.				Trawls.				No. of Lobster Canneries.			
Vessels.				Gill Nets.				Trap Nets.				Trawls.				No. of Lobster Canneries.			
Vessels.				Gill Nets.				Trap Nets.				Trawls.				No. of Lobster Canneries.			
Vessels.				Gill Nets.				Trap Nets.				Trawls.				No. of Lobster Canneries.			
Vessels.				Gill Nets.				Trap Nets.				Trawls.				No. of Lobster Canneries.			
Vessels.				Gill Nets.				Trap Nets.				Trawls.				No. of Lobster Canneries.			
Vessels.				Gill Nets.				Trap Nets.				Trawls.				No. of Lobster Canneries.			
Vessels.				Gill Nets.				Trap Nets.				Trawls.				No. of Lobster Canneries.			
Vessels.				Gill Nets.				Trap Nets.				Trawls.				No. of Lobster Canneries.			
Vessels.				Gill Nets.				Trap Nets.				Trawls.				No. of Lobster Canneries.			
Vessels.				Gill Nets.				Trap Nets.				Trawls.				No. of Lobster Canneries.			
Vessels.				Gill Nets.				Trap Nets.				Trawls.				No. of Lobster Canneries.			
Vessels.				Gill Nets.				Trap Nets.				Trawls.				No. of Lobster Canneries.			
Vessels.				Gill Nets.				Trap Nets.				Trawls.				No. of Lobster Canneries.			
Vessels.				Gill Nets.				Trap Nets.				Trawls.				No. of Lobster Canneries.			
Vessels.				Gill Nets.				Trap Nets.				Trawls.				No. of Lobster Canneries.			
Vessels.				Gill Nets.				Trap Nets.				Trawls.				No. of Lobster Canneries.			
Vessels.				Gill Nets.				Trap Nets.				Trawls.				No. of Lobster Canneries.			
Vessels.				Gill Nets.				Trap Nets.				Trawls.				No. of Lobster Canneries.			
Vessels.				Gill Nets.				Trap Nets.				Trawls.				No. of Lobster Canneries.			
Vessels.				Gill Nets.				Trap Nets.				Trawls.				No. of Lobster Canneries.			
Vessels.				Gill Nets.				Trap Nets.				Trawls.				No. of Lobster Canneries.			
Vessels.				Gill Nets.				Trap Nets.				Trawls.				No. of Lobster Canneries.			
Vessels.				Gill Nets.				Trap Nets.				Trawls.				No. of Lobster Canneries.			
Vessels.				Gill Nets.				Trap Nets.				Trawls.				No. of Lobster Canneries.			
Vessels.				Gill Nets.				Trap Nets.				Trawls.				No. of Lobster Canneries.			
Vessels.				Gill Nets.				Trap Nets.				Trawls.				No. of Lobster Canneries.			
Vessels.				Gill Nets.				Trap Nets.				Trawls.				No. of Lobster Canneries.			
Vessels.				Gill Nets.				Trap Nets.				Trawls.				No. of Lobster Canneries.			
Vessels.				Gill Nets.				Trap Nets.				Trawls.				No. of Lobster Canneries.			
Vessels.				Gill Nets.				Trap Nets.				Trawls.				No. of Lobster Canneries.			
Vessels.				Gill Nets.				Trap Nets.				Trawls.				No. of Lobster Canneries.			
Vessels.				Gill Nets.				Trap Nets.				Trawls.				No. of Lobster Canneries.			
Vessels.				Gill Nets.				Trap Nets.				Trawls.				No. of Lobster Canneries.			
Vessels.				Gill Nets.				Trap Nets.				Trawls.				No. of Lobster Canneries.			
Vessels.				Gill Nets.				Trap Nets.				Trawls.				No. of Lobster Canneries.			
Vessels.				Gill Nets.				Trap Nets.				Trawls.				No. of Lobster Canneries.			
Vessels.				Gill Nets.				Trap Nets.				Trawls.				No. of Lobster Canneries.			
Vessels.				Gill Nets.				Trap Nets.				Trawls.				No. of Lobster Canneries.			
Vessels.				Gill Nets.				Trap Nets.				Trawls.				No. of Lobster Canneries.			
Vessels.				Gill Nets.				Trap Nets.				Trawls.				No. of Lobster Canneries.			
Vessels.				Gill Nets.				Trap Nets.				Trawls.				No. of Lobster Canneries.			
Vessels.				Gill Nets.				Trap Nets.				Trawls.				No. of Lobster Canneries.			
Vessels.				Gill Nets.				Trap Nets.				Trawls.				No. of Lobster Canneries.			
Vessels.				Gill Nets.				Trap Nets.				Trawls.				No. of Lobster Canneries.			
Vessels.				Gill Nets.				Trap Nets.				Trawls.				No. of Lobster Canneries.			
Vessels.				Gill Nets.				Trap Nets.				Trawls.				No. of Lobster Canneries.			
Vessels.				Gill Nets.				Trap Nets.				Trawls.				No. of Lobster Canneries.			
Vessels.				Gill Nets.				Trap Nets.				Trawls.				No. of Lobster Canneries.			
Vessels.				Gill Nets.				Trap Nets.				Trawls.				No. of Lobster Canneries.			
Vessels.				Gill Nets.				Trap Nets.											

* Add 1888 cwt. lobsters--\$18,880.

Return showing the Kinds and Quantities of Fish and Fish Products in the County of Shelburne, Province of Nova Scotia, for the Year 1903.

Number.	DISTRICTS.	KINDS OF FISH.															FISH PRODUCTS.		TOTAL VALUE OF ALL FISH.	Number.		
		Cod, dried, cwt.	Cod, tongues and sounds, brls.	Haddock, fresh, lbs.	Haddock, dried, cwt.	Haddock, smoked, finnan haddies, lbs.	Hake, dried, cwt.	Pollock, cwt.	Halibut, lbs.	Trout, lbs.	Smelts, lbs.	Alewives or Gas-	Bass.	Flounders, brls.	Tom Cod or Frost Fish, lbs.	Squid, brls.	Coarse and mixed fish, brls.	Fish oil, galls.			Fish as bait, brls.	Clams, brls.
Shelburne County.																						
1	Woods Harbour.	4500		500	100			250	300									200	7600			81,445 00
2	Shag Harbour ..	2000		900	125			1100	900	200		35						350	850			40,686 00
3	Bear Point	1000		150	60			90	100									60	550			6,817 50
4	Cape Island	40000		9000	3000			1600	18000									2500	10000			283,408 00
5	Barrington	9000		1300	200			300	375	200		375			560			160	2500			48,916 30
6	Ports La Tour and Baccaro	21700		1650	2600			4250	4600	300		175						375	2250			134,925 00
7	Cape Negro and Island	28800		1000	1100			1250	1275			160						750	1600			153,698 50
8	Port Clyde.....	1000			30														200			12,815 00
9	North East Harbour to Port Saxon.	500	2	8 0	50		20	35	750	300		65		3	400			150	15	50		9,145 50
10	Black Point to Round Bay.....	550	2	900	150		25	80	450	200	500	550		8	1800	600	2	350	100	10		15,157 25
11	Roseway and McNutt's Island	410	1	500	180		2	60	1285	300	600	50		20	2000	700	2	300	40	20		9,585 00
12	Gunning Cove to Birchtown..	175	1	1050	85			25	200	500	100	80		7	1200	2000	5	150	20	10		5,669 50
13	Shelburne and Sandy Point	6000	5	4500	500	5000		300	500	5000	600	250		10	1800	1500	5	1300	40	450		46,917 50
14	Jordan.....	100	1	1400	35	200		9	150	1000	800	33		5	1000	1200	5	100	20	10		4,357 00
15	Lockeport.....	8500	10	2500	800		71	550	11100	1000	500	60	800	12	1500	1000	15	500	100	705		119,933 35
Totals		124235	22	26150	9015	5200	118	9899	39985	9000	3100	1833	800	65	9300	7960	39	42	7245	25885	1255	
Values,		559057	220	785	27045	312	266	19798	3998	900	155	7332	80	650	279	239	156	84	2174	38828	10040	992,356 40

Return showing the Number, Tonnage and Value of Vessels, Boats, Nets, &c., and the Kinds of Fish, &c.—Nova Scotia—Con.

FISHING VESSELS AND BOATS.				FISHING GEAR OR MATERIALS.				KINDS OF FISH.												
Vessels.				Boats.				Gill Nets.				Trawls.								
Number.	Tonnage.	Value.	Men.	Number.	Value.	Men.	Number.	Fathoms.	Value.	Number.	Value.	Salmon, fresh, lbs.	Herring, fresh, lbs.	Herring, smoked, lbs.	Mackerel, fresh, lbs.	Lobsters, preserved in cans, lbs.	Lobsters, fresh in shell, cwt.	Cod, dried, cwt.	Number.	
Yarmouth County.																				
1	Yarmouth.	8	439	44700	103	72	1740	141	490	9800	1900	2580	3	1000	314275	1000	5138	1	5438	
2	Port Maitland	9	138	3700	43	25	500	50	99	1980	990	500	1	1650	59300	500	1313	8	1313	
3	Sandford	3	49	1750	12	29	580	48	300	6000	3000	550		1685	124260	500	178	3	178	
4	Arcadia.	1	10	300	4	25	500	50	56	1120	560				315250		396	4	396	
5	Pineknay Point					32	640	64	100	2000	1000				3248375		344	5	344	
6	Conneau Hill	1	17	500	4	25	500	50	50	1000	500				324500		763	6	763	
7	Tusket					260	2600	260	1800	36000	18000				100000	2000		7	763	
8	Tusket Wedge	2	160	3500	36	74	1480	148	190	3800	1900	180	6	325	1353625		401	8	401	
9	Pubnico	14	731	32280	192	123	2460	246	189	3780	1890			5	136600		6458	9	6458	
10	Argyle	2	26	800	10	23	460	46	125	2500	1250			1	1417625		338	10	338	
11	El Brook					47	705	94	160	3200	1600				25000	500		11	11	
12	Salmon River					24	360	24	103	2060	1630				50000	700		12	12	
Totals		40	1570	87530	404	759	12525	1224	3662	73240	36620	297	3810	199060	746810	5200	90000	986736	30000	15929
Values														1812	74668	104	10800	246684	300000	71680

Return showing the Kinds and Quantities of Fish and Fish Products in the County of Yarmouth, &c.—Nova Scotia—Con.

Number.	DISTRICTS.	KINDS OF FISH.										FISH PRODUCT.					Total VALUE OF ALL FISH.	Number.		
		Cod, tongues and sounds, brls.	Haddock, fresh, lbs.	Haddock, smoked Fin- nan Haddies, lbs.	Pollock, cwt.	Halibut, lbs.	Trout, lbs.	Shad, brls.	Smelts, lbs.	Alewives or Caspereau, brls.	Eels, brls.	Flounders, lbs.	Tom Cod or frost fish, lbs.	Squid, brls.	Coarse and mixed fish, brls.	Fish oil, galls.			Fish as bait, brls.	Fish as manure, brls.
Yarmouth County.																				
1	Yarmouth	5	185470	4000	1281	29500	500		15000			3000		15	120	35000	250	150	30	406,197 85
2	Port Maitland	5	86550	17000	1475	7525			10000					12	1350	16000	55	530	10	28,536 00
3	Sandford		28660	5700	89	9430			900						370	200	70	260	15	12,063 40
4	Arcadia		17500		546	625	1000		3000	5	22		1000		5	80			25	19,644 00
5	Pineknay Point		19375		52						15			4	20	100	25		40	43,710 50
6	Conneau Hill		4750		48						10			5	22	90	26		25	7,347 00
7	Tusket					5750	10000	1000	10000	3000	50		8000		25		350		20	26,615 00
8	Tusket Wedge		43375		503				1000						400	1200	95		40	84,895 50
9	Pubnico	5	421800		6400				10000	35			5000	70	55	3000	200		60	141,667 00
10	Argyle		12625		48	625	500		1000	100	25		1800				170		30	27,421 50
11	Bel Brook						500		1000	500	50						100		25	3,610 00
12	Salmon River						6000		1200	700	40		3000				90		20	4,952 50
Totals		15	820105	26700	10442	53455	18500	1000	44100	4450	212	3000	22100	151	2367	9770	1440	940	340	
Values		150	24603	1602	20884	5346	1850	10000	2205	17760	2120	90	663	604	4734	2931	2160	470	2720	
																				806,630 25

Return showing the Number, Tonnage and Value of Vessels and Boats, and the Quantity of Fish, &c.—Nova Scotia—Continued.

Number.	FISHING VESSELS AND BOATS.				FISHING GEAR OR MATERIALS.						KINDS OF FISH.															
	Vessels.		Boats.		Gill Nets.		Seine.		Trawls.		Weirs.		Lobster canneries, No.	Salmon, fresh, lbs.	Herring, salted, bbls.	Herring, fresh, lbs.	Herring, smoked, lbs.	Mackerel, fresh, lbs.	Lobsters, preserved in cans, lbs.	Lobsters, fresh in shell, cwt.	(Cod, dried, cwt.	Cod, tongues and sounds, bbls.	Number.			
	Tonnage.	Value.	Men.	Number.	Value.	Number.	Value.	Number.	Value.	Number.	Value.															
												Number.												Value.	Number.	Value.
<i>Digby County.</i>																										
1	Digby	16	668	29420	179	144	3350	58	62	1240	300	2	550	625	15625	4	750	150	20000	200000	300	12000	7284	18	1	
2	Bay View and Culloden					26	830	40	35	720	185	2	250	48	525			25	7200			625	11	2		
3	Gulliver's Cove to Waterford					52	1350	60	46	920	220	4	115	39	465	4	800	275	322000		1150	260	1845	14	3	
4	Centreville					30	900	40	45	850	250	1	30	40	650	1	150	200	394		24250	550	7568	6	4	
5	Sandy Cove					33	700	18	18	360	90	2	300	15	300	1	300	30	4000	800	3000	350	222	2	5	
6	Mink Cove	1	23	1000	9	15	560	22	60	1200	285	2	125	25	500			68	23380	25000		165	564	7	6	
7	Little River					36	1100	31	37	740	190	2	250	31	620			20	9000	100000		300	1094	7	7	
8	Whale Cove to East Ferry					37	750	57	54	1095	265	1	95	96	1920				100600			515	1375	18	8	
9	Tiverton & Central Grove	3	83	2350	22	158	5800	126	123	2380	610	3	550	120	2350		2	128	110200	150000		1800	7843	14	9	
10	Freeport	10	298	4800	89	105	2550	125	104	2080	550	3	190	160	800	1	150	75	112700			1050	20346	25	10	
11	Westport	13	325	7500	104	148	3900	200	120	2400	600	11	2500	104	3850			75	21800			1600	11466	26	11	
12	Smith's Cove & Brighton	1	12	600	3	18	300	27	15	300	150	5	98	5	100	10	1450	135	23860	13360	100	83	130		12	
13	Plympton to Weymouth					21	410	36	21	420	120			23	140	1	60	33	16100			198	167	7	13	
14	Belliveau Cove	1	24	1200	7	26	320	48	66	1650	700			50	500	2	120		45000			80	200		14	
15	Grosses Coques					12	200	20	5	150	40	1	20	2	30	4	400		80000				60		15	
16	Church Point and Little Brook																									
17	Conceauville	1	37	800	8	33	660	36	23	690	224			10	150				14000			130	150		16	
18	Saulnierville					16	320	24	12	360	96						1		3500		30854	90	185		17	
19	Meteghan & River	4	80	900	26	43	1080	56	38	1140	304			4	80				4200			60	130		18	
20	Salmon River to Cape St. Mary's	5	95	4200	31	12	690	25	52	1560	416							720	36000		19200	65	568		20	
Totals		55	1645	52770	478	976	25990	881	946	20955	5675	39	5073	1397	28605	28	4180	1345	1103	956840	700345	2350	19681	62307	155	
Values																		269	4964	9568	14007	282	32,807	280381	1550	

Return showing the Quantity and Value of Fish, &c.—Nova Scotia—Continued.

22—61

SESSIONAL PAPER No. 22

Number.	Districts.	Kinds of Fish.													Fish Products			Clams, brls.	TOTAL VALUE OF ALL FISH.	Number.		
		Haddock, fresh, lbs.	Haddock, dried, cwt.	Smoked Finnan Haddies, lbs.	Hake, dried, cwt.	Hake, sounds, lbs.	Pollock, cwt.	Halibut, lbs.	Trout, lbs.	Shad, brls.	Smelts, lbs.	Flounders, lbs.	Tom cod or frost fish, lbs.	Squid, brls.	Coarse and mixed fish, brls.	Fish oil, galls.	Fish as bait, brls.				Fish as manure, brls.	
Digby County.																						
1	Digby.....	225000	2000	840000	18020	5950	5238	161950	2100	3	3500	.....	.....	1130	13500	5325	750	3480	1800	330,900 00	1
2	Bay View and Culloden.....	13000	905	.....	1483	1500	443	3710	18	.....	.....	825	.....	100	385	758	675	575	.....	16,779 70	2
3	Gulliver's Cove to Waterford.....	105800	1850	.....	3018	1005	770	2035	43	22	2800	1325	.....	953	770	1350	340	1115	30	39,857 05	3
4	Centreville.....	38000	75	312000	5667	2000	750	3250	.....	.....	.....	535	.....	600	498	4840	300	1200	.....	96,306 00	4
5	Sandy Cove.....	3000	150	.....	400	500	150	75	.....	.....	980	550	.....	7	30	300	100	175	30	8,029 50	5
6	Mink Cove.....	28750	1200	19500	2470	1125	355	1050	.....	.....	.....	400	.....	5	2	1050	250	450	.....	19,990 30	6
7	Little River.....	125000	3000	100000	5533	3600	100	3600	.....	.....	.....	900	.....	50	1300	1500	350	1600	.....	48,334 00	7
8	Whale Cove to East Ferry.....	177000	1355	.....	3070	2800	815	2895	35	.....	.....	630	.....	330	2500	2320	1225	2375	.....	42,188 90	8
9	Tiverton & Central Grove.....	56100	2078	125000	10163	1075	3926	3590	115	.....	.....	775	.....	168	6180	9800	1375	2860	.....	130,893 00	9
10	Freeport.....	100000	2489	.....	1906	2800	1444	29250	28	.....	.....	525	.....	525	3800	6128	850	3875	40	166,589 45	10
11	Westport.....	48000	3100	6580	8350	7000	15883	97840	28	.....	.....	650	.....	550	3640	12500	900	4200	.....	160,010 30	11
12	Smith's Cove & Brighton.....	7100	.....	.....	70	50	40	150	50	21	2200	980	.....	7	365	50	410	495	150	5,320 70	12
13	Plympton to Weymouth.....	44250	.....	.....	45	54	188	85	170	6	16400	450	25000	.....	38	135	643	330	1620	11,097 75	13
14	Belliveau Cove.....	108000	.....	.....	80	.....	420	.....	.....	.....	.....	.....	.....	.....	.....	40	600	.....	1500	10,322 00	14
15	Grosses Coques.....	40000	.....	.....	.....	.....	60	.....	.....	.....	.....	.....	.....	.....	.....	.....	100	.....	100	2,740 00	15
16	Church Point and Little Brook.....	25000	16
17	Comeauville.....	8700	.....	.....	.....	.....	210	.....	.....	.....	.....	.....	.....	.....	.....	.....	120	.....	150	3,765 00	16
18	Saulnierville.....	18700	.....	.....	.....	.....	65	.....	.....	.....	.....	.....	.....	.....	.....	.....	35	.....	80	10,087 00	17
19	Meteghan & River.....	33500	.....	.....	.....	.....	210	.....	.....	.....	.....	.....	.....	.....	.....	.....	25	.....	40	2,325 50	18
20	Salmon River to Cape St. Mary's.....	41800	.....	.....	.....	.....	270	.....	.....	.....	.....	.....	.....	.....	.....	.....	110	.....	100	11,638 50	19
Totals.....		1246700	18202	1403080	60275	29459	45855	339480	2587	52	25880	8547	27440	4425	33023	46096	9288	22730	5740	13,165 00		20
Values.....		37401	54606	84184	135619	14730	91710	33948	259	520	1294	256	823	17700	6604	613829	13932	11365	11480	1,130,339 65		21

RETURN showing the Fishing Material and the Quantity and Value of Fish, &c. Nova Scotia—Continued.

Number.	DISTRICTS.										FISHING VESSELS AND BOATS.						FISHING GEAR OR MATERIALS.						Lobsters, fresh in shell, cwt.	Number.		
	Vessels.					Boats.					Gill Nets.			Seines.			Trawls.		Weirs.							
	Number.	Tonnage.	Value.	Men.	Value.	Number.	Value.	Men.	Number.	Fathoms.	Value.	Number.	Fathoms.	Value.	Number.	Value.	Number.	Value.	Number.	Value.	Number.	Value.				
Annapolis County.																										
1	Margaretville	3	51	1200	10	8	160	8	10	300	100	1	100	60	20	100	2	250	1000	556	1	18				
2	Port George	1	10	300	4	10	200	20	25	750	250				40	200	1	150	500	319	70	3				
3	Port Lorne	2	35	1000	8	20	400	30	80	2400	800				30	150				710	250	4				
4	Hampton	1	10	300	3	55	1100	60	60	1800	600				110	525				337	450	5				
5	Phinny and Parker's Coves	1	11	350	4	30	600	28	28	840	280				30	150				287	560	6				
6	Hilsburn	2	33	800	10	28	560	28	23	690	230				126	630				193	300	7				
7	Litchfield	1	49	800	6	40	800	40	10	300	100				200	900				800	300	7				
8	Victoria Beach																			20	900	9				
9	Clementsport and Annapolis																					10				
10	Lequille and Round Hill Rs. and inland lakes																									
Totals		11	199	4750	45	208	4160	244	306	8510	2770	1	100	60	576	2755	9	1000	5600	3150	2448					
Values																					1120	14175	24180			

* Hook and line fishing.

RETURN showing the Fishing Material and the Quantity and Value of Fish, &c.—Nova Scotia—Continued.

Number.	DISTRICTS.										TOTAL VALUE OF ALL FISH.	Number.																					
	Cod, dried, cwt.	Cod, tongues and sounds, bbls.	Haddock, fresh, lbs.	Haddock, dried, cwt.	Hake, dried, cwt.	Hake, sounds, lbs.	Pollock, cwt.	Halibut, lbs.	Trout, lbs.	Shad, bbls.			Smelts, lbs.	Eels, bbls.	Fish oil, Galls.	Fish as bait bbls.	Fish as manure, bbls.	Clams, bbls.															
Annapolis County.																																	
1	Margaretville	520	1000	62	12	200	163	5000	..	..	..	..	1000	50	20	..	6,616 00	1											
2	Port George	130	1500	81	60	200	10	2400	..	..	..	..	1500	60	30	..	3,648 50	2											
3	Port Lorne	370	1230	231	660	300	100	600	..	..	..	..	2000	60	35	..	8,922 40	3											
4	Hampton	290	1000	430	1020	300	170	..	..	..	..	..	1500	50	25	..	9,984 00	4										
5	Phinny and Parker's Coves	540	2200	716	1740	1050	315	..	..	..	..	..	2500	130	130	..	18,600 00	5										
6	Hilsburn	560	1200	890	1500	800	20	500	..	..	..	..	1500	70	75	..	16,615 00	6											
7	Litchfield and Thomas' Cove	540	21000	1150	1750	2000	120	..	..	..	..	..	2300	140	40	..	16,556 00	7										
8	Victoria Beach	900	50000	1699	2570	3000	360	3000	..	..	..	..	1500	85	60	..	27,637 00	8											
9	Clementsport and Annapolis	200	1000	100	200	..	20	800	800	20	1000	..	..	..	..	20	2,980 00	9											
10	Lequille and Round Hill R's. and inland lakes. . . . .	..	..	..	..	..	..	..	5800	..	..	10	..	..	..	..	900 00	10		
Totals																	4050	38	80130	5359	9512	7850	1278	12300	6600	20	1000	10	13800	645	415	20	112,458 90
Values																	18225	380	2404	16077	21402	3925	2556	1230	660	200	50	100	4140	968	207	160	

RETURN showing the Quantity and Value of Fish, &c.—Nova Scotia—Continued.

Number.	Districts.	King's County.															Total Value of All Fish.	Number.	
		Mackerel, fresh, lbs.	Lobsters, fresh in shell, cwt.	Cod, dried, cwt.	Haddock, fresh, lbs.	Haddock, dried, cwt.	Hake, dried, cwt.	Pollock, cwt.	Halibut, lbs.	Trout, lbs.	Shad, bbls.	Alewives or Gaspereau, bbls.	Bass, lbs.	Coarse and mixed fish, bbls.	Fish as bait, bbls.	Fish as manure, bbls.			Clams, bbls.
1	Avonport and vicinity	...	...	75	1000	...	80	250	3750	10	265	...	100	600	20	...	...	1,755 00	1
2	Stars Pt. and Kingsport	...	...	98	3000	...	30	400	...	2	14	...	200	2100	10	...	800	2,003 50	2
3	Medford	15000	125	60	7100	52	75	150	...	4	4	...	225	2250	550	2000	...	6,920 00	3
4	Minas Gut, Scott's Bay and Wells Cove	...	...	...	...	...	...	...	...	1	...	...	125	5000	500	1000	...	13,234 00	4
5	Whalen Beach Baxter's Harbour	...	5	204	51500	75	200	525	...	1	...	...	100	3600	200	...	...	17,040 00	5
6	Sheffield Vault and Race Pt.	4500	55	22	1600	...	55	...	...	...	...	...	150	5000	500	2500	...	10,712 00	6
7	Halls Harbour	5000	100	95	69600	250	400	800	...	...	3	...	350	5200	335	1000	...	57,615 00	7
8	Hunting Point and Chipman Brook	2000	130	130	34500	10	800	300	...	...	10	...	125	2000	265	1000	...	18,856 00	8
9	Canada Creek	1000	90	132	10500	10	75	...	...	...	8	...	125	2000	265	1000	...	9,634 75	9
10	Harbourville	800	...	25	2500	8	26	150	...	...	6	...	...	1000	85	800	...	4,022 25	10
11	Ogilvie Wharf	...	100	75	1000	4	10	...	...	...	5	...	100	...	20	...	...	1,578 50	11
12	Victoria to Bishop's Brook	400	36	54	2900	9	52	500	2500	...	6	...	50	1820	120	1700	...	7,438 00	12
Totals		28700	641	970	185200	418	112	1893	3075	6250	18	321	1525	28570	2605	10000	800		
Values		3444	6410	4365	5556	1254	252	3606	308	625	180	1284	152	57140	3908	5000	1600	150,809 00	

RECAPITULATION

Of the Yield and Value of the Fisheries in District No. 3, Province of Nova Scotia, for the Year 1903.

Kinds of Fish.	Quantity.	Rate.	Value.	Total Value.
		\$ cts.	\$ cts.	\$ cts.
Salmon, fresh..... lbs.	114,775	0 20	22,955 00	
" smoked..... "	2,850	0 20	570 00	
				23,525 00
Herring, salted..... brls.	21,449	4 50	96,520 50	
" fresh..... lbs.	8,640,700	0 01	86,407 00	
" smoked. "	801,045	0 02	16,020 90	
				198,948 40
Mackerel, fresh..... "	156,820	0 12	18,818 40	
" salted..... brls.	4,716	15 00	70,740 00	
				89,558 40
Lobsters, canned..... lbs.	1,981,306	0 25	495,326 50	
" fresh in shell..... cwt.	70,060	10 00	700,600 00	
				1,195,926 50
Cod, dried..... "	375,703	4 50	1,690,663 50	
" tongues and sounds..... brls.	412	10 00	4,120 00	
				1,694,783 50
Haddock, fresh..... lbs.	2,368,985	0 03	71,069 55	
" dried..... cwt.	40,551	3 00	121,653 00	
" smoked (finnan haddies)..... lbs.	1,436,880	0 06	86,212 80	
				278,935 35
Hake, dried..... cwt.	71,832	2 25	161,622 00	
" sounds..... lbs.	37,539	0 50	18,769 50	
				180,391 50
Pollock..... cwt.	70,491	2 00		140,982 00
Halibut..... lbs.	594,720	0 10		59,472 00
Trout..... "	52,817	0 10		5,281 70
Shad..... brls.	1,106	10 00		11,060 00
Smelts..... lbs.	92,705	0 05		4,635 25
Alewives..... brls.	9,117	4 00		36,468 00
Bass (sea). lbs.	2,325	0 10		232 50
Eels..... brls.	433	10 00		4,330 00
Flounders..... lbs.	272,045	0 03		8,161 35
Tom cod..... "	63,130	0 03		1,893 90
Squid..... brls.	4,934	4 00		19,736 00
Coarse and mixed fish..... "	67,344	2 00		134,688 00
Clams (in shell)..... "	6,540	2 00	13,080 00	
" (shelled)..... "	1,642	8 00	13,136 00	
				26,216 00
Fish oil..... galls.	165,716	0 30		49,714 80
Fish as bait..... brls.	43,840	1 50		65,760 00
Fish as manure..... "	34,595	0 50		17,297 50
Total for 1903.....				4,247,997 65
" 1902.....				4,609,900 20
Decrease.....				361,902 55

SESSIONAL PAPER No. 22

RECAPITULATION

Of the Value of Fishing Vessels, Nets, &c., in the District No. 3, Nova Scotia, for the Year 1903.

Material.	Value.	Total.
	\$ cts.	\$ cts.
350 fishing vessels (20,635 tons).....	1,090,325	
6,871 " boats.....	161,522	
315 " dories.....	3,150	
30,147 gill nets (603,071 fathoms).....	144,771	
298 seines (42,306 fathoms).....	58,848	
140 trap nets	52,780	
3,673 trawls.....	75,100	
74 weirs	13,405	
23 smelt nets.....	705	
17,530 hand lines	13,720	
		1,614,326
65 lobster canneries.....	43,850	
233,255 " traps	213,729	
		257,579
176 freezers and ice houses.....	35,289	
1,597 smoke and fish houses.....	93,049	
564 fishing piers and wharfs.....	213,065	
120 " tugs and smacks.....	78,480	
		419,883
Total....		2,291,788

Number of persons employed in the fisheries of the same district, 1903.

Men in fishing vessels.....	4,405
" " boats.....	7,095
Persons in lobster canneries.....	1,926
Total.....	13,426

RECAPITULATION.

Showing the Number, the Quantity and Value of Fishing Materials, &c.—Continued.

Number.	FISHING GEAR OR MATERIALS.				LOBSTER PLANT.				OTHER FIXTURES USED IN FISHERIES.											
	Weirs.		Smelt Nets.		Hand Lines.		Canneries.		Traps.		Persons employed in canneries.		Freezers and Icehouses.		Smoke and Fishhouses.		Piers and Wharves.		Tugs, Steamers and Snacks.	
	Number.	Value.	Number.	Value.	Number.	Value.	Number.	Value.	Number.	Value.	Persons employed in canneries.	Number.	Value.	Number.	Value.	Number.	Value.	Number.	Value.	
COUNTIES.																				
District No. 1—																				
1	Richmond	...	...	17	655	4719	2379	11	12300	38450	20425	257	1	1400	787	20180	144	6155	23	3290
2	Cape Breton	...	...	...	...	2098	1256	14	16600	31588	17721	295	4	1590	217	4294	130	16221	18	6625
3	Victoria	...	...	1	8	1685	1224	18	5910	14553	8646	200	10	3705	126	9699	31	4215	6	910
4	Inverness	20	200	...	...	2293	1869	19	9715	37320	20494	282	13	4175	215	6830	68	35837	15	640
District No. 2—																				
5	Cumberland	1	40	70	1540	108	76	37	22645	49250	35045	415	...	...	55	3811	...	...	...	5
6	Colchester	6	1200	7	175	9	18	3	2200	4000	2000	31	4	300	22	1000	...	...	...	6
7	Pictou	...	...	8	310	150	118	21	26550	43700	27810	492	...	...	13	247	...	...	...	7
8	Antigonish	...	...	1	10	222	134	6	6300	16800	8580	149	2	3000	93	949	...	...	3	400
9	Guysborough	...	...	17	370	4410	3180	28	31000	88900	65430	509	35	32075	665	56275	207	81425	6	14550
10	Halifax	...	...	...	...	5095	2430	20	16100	70786	27689	306	9	5250	907	41962	712	33579	26	19905
11	Hants	6	365	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	11
District No. 3—																				
12	Lunenburg	...	...	...	...	3822	2189	6	2150	16910	8555	485	6	1650	351	24050	232	36400	14	1350
13	Queens	...	...	...	...	990	505	9	2900	19345	14424	97	47	6915	262	6004	9	1480	17	4330
14	Shelburne	...	...	5	225	5856	5398	21	16000	12950	109400	203	19	5600	390	24140	175	27550	*25	17050
15	Yarmouth	7	1000	4	60	3811	1905	19	13200	40810	40810	982	30	14500	105	9050	41	57600	50	47275
16	Digby	28	4180	14	420	2080	2806	10	9600	34376	34376	116	45	5464	248	23725	107	90035	14	8475
17	Annapolis	9	1000	...	...	405	405	...	...	7800	5100	...	12	600	135	2460	...	...	...	17
18	Kings	30	7225	...	...	566	512	...	...	1064	1064	43	17	560	106	3620	...	...	...	18
Totals.		107	15210	144	3773	38319	26404	242	193170	628602	447569	4862	254	86784	4697	238296	1856	390497	217	124800

* Add 315 dories, \$8,150.

Showing the Kinds and Quantities of Fish and Fish Products in the whole Province of Nova Scotia, for the Year 1903.

COUNTIES.	KINDS OF FISH.																	Number.	
	Salmon, fresh, lbs.	Salmon, preserved in cans, lbs.	Salmon, salted or smoked, lbs.	Herring, salted, brls.	Herring, fresh, lbs.	Herring, smoked, lbs.	Mackerel, fresh, lbs.	Mackerel, salted, brls.	Lobsters, preserved in cans, lbs.	Lobsters, fresh in shell, cwt.	Cod, dried, cwt.	Cod, tongues and sounds, brls.	Haddock, fresh, lbs.	Haddock, dried, cwt.	Haddock, smoked, human haddies, lbs.	Hake, dried, cwt.	Hake, sounds, lbs.		Pollock, cwt.
District No. 1.																			
1 Richmond.....	3200	1729	.....	6230	161300	.....	154650	13693	255160	1344	21010	123	577300	8373	97500	.....	297	111	3729
2 Cape Breton.....	19194	.....	.....	4511	34380	.....	13270	1068	325256	5945	13662	5	5088	1818	.....	.....	127	.....	1074
3 Victoria.....	35710	.....	*80	675	30465	.....	8000	724	177014	81	13505	3	.....	2582	.....	.....	.....	.....	534
4 Inverness.....	39168	1392	19	2559	503660	.....	700	1312	329492	493	11410	15	1150	1262	500	.....	1624	705	40
District No. 2.																			
5 Cumberland.....	12550	.....	500	709	34300	135000	9700	.....	447648	315	710	.....	11320	659	.....	.....	820	.....	791
6 Colchester.....	122590	.....	.....	25	8000	6000	.....	.....	33552	.....	430	.....	4000	50	.....	.....	21	.....	16
7 Pictou.....	47000	.....	.....	60	171000	.....	17000	20	462432	.....	95	.....	200	8	.....	.....	59	.....	5
8 Antigonish.....	39190	.....	.....	827	209652	.....	54412	544	166032	.....	636	.....	1300	40	.....	.....	571	1346	16
9 Guysborough.....	49345	2050	900	7350	1201400	.....	3031114	25062	543196	2673	40870	265	3359560	6018	311000	.....	1221	925	24754
10 Halifax.....	17070	.....	1615	6877	101650	.....	1629460	2393	432624	9563	18522	34	109800	1209	.....	.....	1852	1001	3026
11 Hants.....	20070	.....	.....	.....	.....	.....	.....	.....	.....	.....	42	.....	.....	.....	.....	.....	.....	.....	6
District No. 3.																			
12 Lunenburg.....	18375	.....	635	1179	5250	.....	21290	3722	122032	1122	164728	182	10700	7425	1900	.....	1815	230	1066
13 Queen's.....	19060	.....	2215	640	.....	.....	6000	742	193968	1310	3484	.....	.....	132	.....	.....	.....	.....	148
14 Shelburne.....	4835	.....	.....	6380	6900	.....	8480	252	547344	12970	124235	22	26150	9015	5200	.....	118	.....	9899
15 Yarmouth.....	9060	.....	.....	.....	7468810	5200	90000	.....	986736	30000	15929	15	820105	.....	26700	.....	.....	.....	10442
16 Digby.....	1345	.....	.....	1103	956840	700345	2350	.....	131226	19681	62307	155	1246700	18202	1403080	.....	60275	29459	45855
17 Annapolis.....	5600	.....	.....	3150	.....	.....	.....	.....	.....	2448	4050	38	80130	5359	.....	.....	9512	7850	1278
18 King's.....	56500	.....	.....	8997	202900	95500	28700	.....	.....	641	970	.....	185200	418	.....	.....	112	.....	1803
Totals.....		519862	5171	5865	51272	11096507	942045	5075126	49532	5153712	90474	496395	857	6438703	62570	1845880	78424	41627	104482
Values.....		\$ 103972	776	1173	230724	110965	18841	609015	742987	1288428	827772	2234677	8570	193161	187710	110753	176455	20813	208964

* 99 barrels.

RETURN showing the Kinds and Quantities of Fish and Fish Products in the Province of Nova Scotia, &c.—Concluded.

KINDS OF FISH—Con.																			
COUNTIES.											TOTAL VALUE OF ALL FISH.								
	Halibut, lbs.	Trout, lbs.	Shad, brls.	Smelts, lbs.	Alwives or gaspa- pear, brls.	Bass, lbs.	Kels, brls.	(Oyster, brls.	Flounders, lbs.	Tom Cod or Frost Fish, lbs.	Squid, brls.	Coarse and mixed fish, brls.	Fish oil, galls.	Fish as bait, brls.	Fish as manure, brls.	Seal skin, No.	Clams, brls.	\$	cts.
District No. 1.																			
1 Richmond	22505	10130		28000	1082		552		255900	186000	1561	3353	18080	3967			185	532,463	56
2 Cape Breton	14867	3450	265	7550	267		165	8	300	4000	356		7167	2117			46	237,307	04
3 Victoria	24600	1490		5600	31		50	49	1800	4300	350	181	5182	287				145,474	75
4 Inverness	2844	2900		4200	211		153	260		700	577	115	3957	2168	489	40	291	201,246	50
District No. 2.																			
5 Cumberland	13350	1300	152	120600	863		65	729	2500	5500		1054	170	5900	4800		43	163,560	10
6 Colchester	5000	19000	1938	10000	300	11450		200					250	40	350		800	63,037	75
7 Pictou		3500		32100	195		174					18		1030	4675		40	138,401	75
8 Antigonish		600	2	10200	38	1400	63	108	21660		10	256	1012	1116	1702			80,946	62
9 Guysborough	232315	21450	4	16960	764	300	485		33000	13400	8507	925	70670	16930	6980	66	106	1,448,253	73
10 Halifax	54115	11240		30410	740		168		225800	25500	480	207	10842	1372	4485	74	1288	576,347	55
11 Hants		3600	19	2150	417	250												6,565	50
District No. 3.																			
12 Lunenburg	145175	955		11000	97		63		251200	5630	319	3342	86730	3977	510		27	945,711	20
13 Queen's	1250	8925	16	7625	2426		83						2075					109,662	25
14 Shelburne	39085	9000		3100	1833	800	65		9300	7960	39	42	7245	25885			1255	992,356	40
15 Yarmouth	53455	18500	1000	44100	4440		212		3000	22100	151	3367	9770	1440	940		340	806,660	25
16 Digby	339480	2587	52	25880					8545	27440	4425	33023	46096	9288	22730		5740	1,130,339	65
17 Annapolis	12300	6600	20	1000			10						13800	645	415		20	112,458	90
18 King's	3075	6253	18		321	1525						28570		2605	10000		800	150,809	00
Totals	964316	131497	3486	360475	14025	15725	2308	1354	913005	302530	16775	73453	283046	78767	58076	192	10981		
Values	96431	13148	34860	18024	56100	1572	23080	6770	24392	9076	67100	146906	84913	118150	29038	240	31814	7,841,602	50

RECAPITULATION

OF the Yield and Value of the Fisheries of the whole of Nova Scotia for the
Year 1903.

Kinds of Fish.	Quantity.	Value.	Total.
		\$ cts.	\$ cts.
Salmon, fresh	Lbs. 519,862	103,972 40	
" preserved	Cans. 5,171	776 15	
" smoked	Lbs. 5,865	1,173 00	
" salted	Brls. 99	1,485 00	107,406 55
Herring, salted	Brls. 51,272	230,724 00	
" fresh	Lbs. 11,096,507	110,965 07	
" smoked	Lbs. 942,045	18,840 90	360,529 97
Mackerel, fresh	Lbs. 5,075,126	609,014 80	
	49,532	742,987 50	1,352,002 30
Lobsters, preserved in cans	Lbs. 5,153,712	1,288,428 00	
" in shell	Cwt. 90,474	827,772 00	2,116,200 00
Cod, dried	Cwt. 496,595	2,234,677 00	
" tongues and sounds	Brls. 857	8,570 00	2,243,247 00
Haddock, dried	Cwt. 62,570	187,710 00	
" fresh	Lbs. 6,438,703	193,161 60	
" smoked (haddies)	Lbs. 1,845,880	110,752 80	491,624 46
Hake, dried	Cwt. 78,424	176,455 12	
" sounds	Lbs. 41,627	20,813 50	197,268 62
Pollock	Cwt. 104,482		208,964 00
Halibut	Lbs. 964,316		96,431 60
Trout	Lbs. 131,477		13,147 70
Smelts	Lbs. 360,475		18,023 75
Shad	Brls. 3,486		34,860 00
Alewives	Brls. 14,025		56,100 00
Eels	Brls. 2,308		23,080 00
Bass (Sea)	Lbs. 15,725		1,572 50
Oyster	Brls. 1,354		6,770 00
Clams	Brls. 10,981		31,814 00
Flounders	Lbs. 813,095		24,393 05
Tom cod	Lbs. 302,530		9,075 90
Squid	Brls. 16,775		67,100 00
Coarse and Mixed fish	Brls. 73,453		146,906 00
Fish oil	Galls. 283,046		84,913 60
" as bait	Brls. 78,767		118,150 50
" as manure	Brls. 58,076		29,038 00
Dog fish	Lbs. 274,300		2,743 00
Seals	No. 192		240 00
Total for 1903			7,841,602 50
Total for 1902			7,351,753 27
Increase			489,849 23

SESSIONAL PAPER No. 22

RECAPITULATION

OF the Fishing Vessels, Boats, Gear, etc., used in the whole of Nova Scotia for the Year 1903.

Articles.	Value.	Total.
	\$ cts.	\$ cts.
576 fishing vessels (25,051 tons)	1,214,625 00	
14,867 " boats	356,003 00	
315 " dories.. ..	3,150 00	
		1,573,778 00
71,530 gill nets (1,536,142 fathoms).....	465,510 00	
734 seines (91,389 fathoms)	173,167 00	
250 trap nets.....	85,280 00	
7,333 trawls.....	113,190 00	
107 weirs.....	15,210 00	
144 smelt nets.....	3,773 00	
38,319 hand lines.....	26,404 00	
		882,534 00
242 lobster canneries.....	193,170 00	
628,602 " traps.....	447,569 00	
		640,739 00
254 freezers and ice houses	86,784 00	
4,697 smoke and fish houses.. ..	238,296 00	
1,856 fishing piers and wharfs.....	390,497 00	
217 fishing tugs and smacks.....	124,800 00	
		840,377 00
Total		3,937,428 00

Statement of Persons employed in the Fishing Industry of Nova Scotia, 1903.

Number of men in fishing vessels.....	5,669
" " " boats.....	17,729
" persons in lobster canneries.....	4,862
Total.. ..	28,260

APPENDIX No. 4.

NEW BRUNSWICK.

District No. 1, comprising the counties of Charlotte and St. John. *Inspector J. H. Pratt, St. Andrews.*

District No. 2, comprising the counties of Albert, Westmorland, Kent, Northumberland, Gloucester and Restigouche. *Inspector R. A. Chapman, Moncton.*

District No. 3, comprising the counties of Victoria, Carleton, York, Sunbury Queen's and King's. *Inspector H. E. Harrison, Maugerville.*

DISTRICT No. 1.

REPORT ON THE FISHERIES OF DISTRICT No. 1, NEW BRUNSWICK, COMPRISING THE COUNTIES OF CHARLOTTE AND ST. JOHN, FOR THE YEAR 1903.

ST. JOHN, N. B., January 20, 1904.

To the Dominion Commissioner of Fisheries,
Ottawa.

SIR,—I have the honour to submit herewith my annual report on the fisheries of District No. 1, New Brunswick, for the past year of 1903, and also the statistics of the value and catch from the numerous sub-districts, with synopses of the several officers' annual reports.

The past season has been fairly prosperous for this district, the schools of each kind of fish that usually frequent the Bay of Fundy were as large as those of an average year, and the value of the fisheries of my district will show an increase for the year of \$3,679 80. While this may not be termed a large increase it is very gratifying however to find it placed on the right side of the ledger.

The total value of the catch for the season is \$1,067,826.00, which compares quite favorably with those of previous years, and I will quote here the value of the catch for each of the pass six seasons, which will give a clear idea of the annual fluctuations.

1898.....	\$1,145,361.00
1899.....	1,216,394.00
1900.....	638,890.00
1901.....	1,285,073.00
1902.....	1,064,126.00
1903.....	1,067,826.00

SESSIONAL PAPER No. 22

THE DOGFISH PEST.

The ravages of these scavengers of the sea, have been written about so frequently to your department during the past few seasons by those interested, that it is needless for me to refer at any length to this important subject. The newspapers of the maritime provinces, with those of the New England States, have been deluged with correspondence on this very absorbing topic for several years past. What action to take in dealing with these sea wolves is a subject of serious concern, for the whole North Atlantic seaboard, and it is earnestly hoped that vigorous steps will be taken which will lessen the ravages of this voracious fish, or that the schools of dogfish will make one of those surprising and mysterious movements with which they are credited, and disappear from our coasts with the same rapidity that they invaded them.

HERRING.

An increase in the catch of sardine herring of 13,109 barrels will be noticed in the returns, increasing the value of this catch over that of previous seasons by \$26,218. The largely increased pack of these small herring in the canning factories of Charlotte county gives an addition this season to the value of the pack of \$100,600, the total value of the pack being \$147,575.

By careful collection of the statistics this season's catch of sardine herring is estimated at 180,000 barrels, which being valued at \$2 a barrel gives the value of catch at \$360,000. Those small herring were taken in fairly good quantities in Charlotte county till the latter part of the summer, when they worked gradually up the Bay of Fundy and remained into St. John harbour, where each night fairly good hauls were made by an immense fleet of fishing vessels that proceeded there from all parts of the Bay of Fundy. At one time I counted 85 vessels there, each of them having on an average six men on board. All the herring caught at St. John were of a good size for canning as sardines and found a ready market on vessels coming from Eastport, Maine. It is estimated that \$10 per hogshead was the average price received by our fishermen for the St. John catch, and an aggregate of \$60,000, was received during the short period that the herring schooled there.

Fifty-two sardine factories were in operation in the state of Maine, during the past season, and placed on the market an aggregate pack of 1,173,000 cases. Fully 1,000,000 of those cases were packed in Washington county alone. The factory owners received for their pack during the season an average price of \$3 per case, which gave the state of Maine the handsome sum of \$351,900 for this year's work. This is very gratifying for the above named state, but when we consider that over three quarters of the raw material for this large output was furnished from the Canadian fisheries, it is not by any means pleasant reading for the Canadian who considers what a loss it is to our country that all this raw material is manufactured in a foreign country, instead of our own. However, the United States tariff will not allow matters to be otherwise at present.

The herring fisheries of Grand Manan island were very poor during the year, and will show a decrease in the value of \$60,000, nearly all this shortage being in the herring catch.

Various and interesting are the views advanced to account for this serious decrease in the herring catch, this fishery being the principal one in the Bay of Fundy. The Fisheries Commission appointed by your department taking evidence in fishing districts of the Bay of Fundy, will doubtless discover the reasons for the decrease, and suggest remedies that will effectually remove the evil.

SALMON.

It is a pleasure to report that an increase of 3,575 lbs. in the catch of that beautiful fish can be noticed in the returns. If the several salmon rivers flowing in the Bay of

4-5 EDWARD VII., A. 1905

Fundy can be properly protected when salmon enter and ascend them for propagation purposes, little anxiety need be feared as to the permanency of this fishery. I am still endeavouring to have a fish-way put in the dam at Salmon river, one of the best salmon streams in the province, and am quite sanguine that ultimately I will be successful.

COD AND HADDOCK.

The catch of cod remains about the same as in 1902, but this season's returns show an increase of \$15,123 in the value of the haddock caught and cured. A greater increase than this would have been shown, but for the ravages of the large schools of dogfish that frequent our coasts. On the Island of Campobello the haddock catch exceeded that of any previous year, and when selling them fresh, the fishermen received very high prices, and this fishery was very profitable to them.

LOBSTERS.

A large increase will be noticed over the previous season of 1902, in not only the amount of lobsters caught, but an increase in the amount canned, showing a total increase in value of \$19,971 over that of previous seasons. The value of catch for both counties this season gives the gratifying figure of \$119,850, but on account of the change just made in the lobster regulations, allowing none to be taken in Charlotte county of a less size than 10½ inches in length, there will not be any canneries in operation during the coming season. Not very much illegal fishing has been attempted by those who have been very active in this unlawful work in the past.

High prices were paid our fishermen not only for the smaller sized lobsters for canning purposes but also for the larger ones for shipment fresh to the outside markets.

POLLOCK.

A most gratifying catch of 20,814 quintals will be noticed in the returns, being very little less than the catch of 1902. The prices received by our fishermen were higher than ever received before, and a good season's work resulted. Pollock in the Quoddy river did not bite very well in the day time, but it was found that they would bite well at night, and large catches were made in consequence of this discovery.

The law preventing the dynamiting of pollock has had a good effect, for while this destructive work was in progress a decrease in any of the various fisheries was immediately attributed to the use of the deadly explosive.

SYNOPSIS OF FISHERIES OFFICERS' REPORTS.

Guardian Skillen of St. Martin, N. B., in his annual report states there was a slight decrease in the catch of lobsters in his district, and the price received by the fishermen was higher than in the previous year, with no attempt at illegal fishing. The cod and pollock fishing are not prosecuted by any persons here, and thirty quintal would represent the entire catch of both those kind of fish. Not more than 125 barrels of herring would be taken in this district, as the former fishermen have gradually been absorbed into the lumber industry. The salmon fishery was very limited, although large schools were along the shores of the bay, and seeking to enter the numerous rivers to deposit their spawn. There were plenty of salmon in the streams during the autumn but still below the average of the year previous.

Guardian Kirsop, who has charge of the district between Lynemouth creek and Mispic, states that there was an increase of about 6,000 lbs. of lobsters caught in his district over that of previous season, and they averaged 2½ pounds each, the fishermen receiving about 14 cents each for them. I do not believe there was any illegal lobster fishing attempted, and I neglected no opportunity to search lobster cars and boats.

SESSIONAL PAPER No. 22

Over 1,500 traps and 25 boats were used by the fishermen in their operations. The catch of cod and pollock was quite small as our fishermen do not engage in these fisheries to any extent.

Guardian Belding, whose district extends from St. John to Chance Harbour, states that lobsters show a decided decrease, not only in catch but in price also. Gaspereau will show a decrease in catch with price about the same as in 1902. There is a slight decrease in the catch of shad, but with an increased price. A large increase will be noticed in the catch of salmon, and a slight decline in the prices paid the fishermen. In the catch of hake, a small increase will be noticed, although the dogfish were a greater hindrance than ever before to the prosecution of this fishery. Sardines struck the shores of my district in larger schools than have been encountered for many years, and this fishery proved very lucrative for the energetic fishermen in my district. Herring struck in plentifully in July and good catches resulted. Herring had not been on the shores during the summer season for over twenty years.

Guardian Murray, of Dipper Harbour, states that the average length of the lobsters caught in his district during the season would be about 13 inches, the weight being about 2 lbs. each. About 14 men were busily employed at this fishery using among them about 600 traps. Very little illegal fishing was attempted, and the season was fairly profitable to the large number of men engaged in the various fisheries.

Guardian Daly, of Lepreau, states that the weir fishermen were very successful this season, having received a good price for their fish, with plenty of boats ready to buy them. There was an increase in the catch of lobsters, more boats and men being engaged. The line fishing was hampered very much by the presence of dogfish which remained on the coast nearly all the year. The clam industry was very brisk during the year, and an increased number were dug and mostly for canning purposes. The close seasons were pretty well observed, although some illegal herring fishing was reported to me, but I was unable to procure the names of the poachers.

Guardian Mealey, of Pennfield, who has charge of the district from Pocologan to Letang, states that the catch and value of the fisheries in his district will be about the same as in 1902. Cod fishing began about June 1, with moderate catches during the month. Hake and haddock were caught in good quantities and a fairly good catch of pollock was taken. The herring schools in the district were not very large, although they were more plentiful than in the previous year. The winter herring, that has not visited our shores for about 14 years, has once more returned much to the delight of the net fishermen. Some very good catches were made during the past few weeks.

The lobster catch will show a fairly good one, although the reports of the numerous fishermen interviewed were very conflicting.

Guardian Catherine, of Letete, the officer in charge of the district from Letang to St. George, states there was a decrease in the catch of sardines in his district caused by the season being extremely dry and the sardine herring went into the heads of the rivers when there were no weirs. Although there was a decrease in the catch, the increased price per hogshead will show an increase in the aggregate. There will be an increased lobster catch with the value very much in advance of that paid in previous years. All the line fisheries will show a decrease, as many of the men formerly engaged hand lining and trowling went to work early in the season in the sardine factories. At the time of writing, and for the past few weeks the net fishermen are doing extremely well netting herring, something they have not done to any extent for the past 15 years.

Guardian Lord, of West Isles, and who controls that district, states in his annual report that there was an increase in the catch of sardine herring. They came in the early spring and though they were not at any time too plentiful, yet they were steady, the channel weirs taking some every time the tides were favourable. The prices were high and the demand was exceptionally good, the fish being very scarce at other places which is usual in the spring months. Those small herring remained till the last of July, when the squid, dogfish, &c., came and drove the herring off shore. In the fall some few herring were caught in the weirs, but they stayed only one day, and then again in December when the herring were leaving St. Andrews bay, the channel weirs made some good catches of large ones for smoking purposes.

4-5 EDWARD VII., A. 1905

The catch of cod this season would be about the same as last year, and high prices were realized.

Although the pollock were very plentiful in Quoddy river, the returns will show a decreased catch, for the reason that their food was plentiful in that river, and they did not bite well at the bait offered them. The prices for pollock were very high and the livers were all sold fresh, the price paid for them being as high as 60 cents per bucket.

The lobster catch will show a slight decrease owing to the law being changed to 10½ inches, and this change was very desirable in the interests of this industry and all those engaged in it. I would recommend either a change in lobster close season, or have no close season at all for 10½ inch lobsters, the same as it is in the state of Maine.

Clams show an increase in catch as there is a small factory in this district, besides a large number shipped in their shell. The price remains about the same as last season, 25 cents per bucket being paid the fishermen for them.

Overseer Savage, of Wilsons Beach, who has charge of the fisheries of the Island of Campobello, states in his annual report that large herring were more scarce than in any previous year. A number of vessels fished on the offshore grounds during the fall but their catch was only about two thirds of that of the previous year.

Sardine herrings were very scarce in this district. There was a fair catch of spring herring, but they came early and passed by before the factories opened. Summer herring made their appearance early in July, but the dogfish and squid soon drove them further inshore, and no more were caught during the season. However, our fishermen handled more sardines than last year, owing to a number of them being engaged in the St. John sardine fishery.

There was about the usual catch of lobsters, although a smaller number of fishermen were engaged in this fishery than last year. The change in the size limit, together with the change of time in the close season have caused a number of the fishermen to abandon lobster fishing, and engage in the line fisheries, which are more profitable. A large number of the lobsters canned on this island were brought in from other districts and very high prices were paid for them by the factory owners for shipment fresh.

There was a fair catch of hake early in the season, but the dogfish made their appearance early in July, compelling the fishermen to abandon this industry.

Cod are never plentiful in this district, there was, however, about the usual quantity caught by the trawlers among their haddock and hake.

Haddock were very plentiful and the catch exceeded that of any previous year. High prices were paid for them fresh, and this branch of fishing was very profitable. There is an unlimited market for finnan-haddies and the demand for them is annually increasing. Pollock made their appearance in May in large schools and there was a good catch till late in October. For some unknown reason they would not bite well in day time, but large catches were made at night. Bait was plentiful, the squid striking in during July, and remaining till the end of the pollock season. High prices were paid the fishermen and they did a profitable business. All kinds of line fishing have been good, prices have been high and, the fishermen have enjoyed a successful season. As nearly all the fishermen are engaged in line fishing there is very little inducement to violate the fishery regulations.

Overseer Fraser, who has charge of the fisheries on the Island of Grand Manan, states that he is sorry to report that there is another decrease in the fisheries this season amounting to \$60,000, this decrease being principally in the shortage of the herring catch. This enormous falling off naturally makes one inquire as to the cause of it. It was believed by some that the scarcity of the herring was on account of the decrease of other fish, as all kinds of fish pursue the herring, but I do not credit this theory. In my opinion, the most reasonable cause is on account of such immense quantities of sardines and britt being taken for lobster bait for several years past. Those small herring are not allowed to mature, and unless some measures are adopted to prohibit the killing of britt in such large quantities, there will be no herring left of any size in the near future. I would recommend a size limit be adopted. About 90 per cent of our fisheries, both fresh and manufactured, go to foreign countries, principally to the United States. The use of your patrol launch during the season was of great assistance in the protection of the fisheries of my district.

SESSIONAL PAPER No. 22

There were no pollock taken in the weirs during the season, but a good number were seined outside of the limits. I would recommend a law be passed allowing seining for pollock in our waters, it is a good way to catch those fish, and of late years they do not take the hook as readily as they formerly did.

If nets were taken out of the water in the day time it would do much to the advantage of net and weir fishermen. Weir owners should also be ordered to place buoys at a distance named by law from their respective weirs, as a guide to the net fishermen. The fishery commissioners who were here investigating matters, will no doubt amend the fishery laws where needed and bring about more harmony among our fishermen, where it does not exist at the present time.

About the usual number of barrels of pickled herring were put up during the year, but there was a great decrease in fresh and smoked herring, which is the principal industry here. Only about half the amount of herring was smoked as compared with 1902. To the northward of Cheney's passage the herring industry has been almost a total failure. Good prices have been paid this season for all kinds of fish.

There was an increase in the haddock catch this year with very good prices. Although there was a decrease in the catch of hake during 1902, I find that there was an increase this past season over that year. Quite a number of the hake fishermen did not engage in the business this season but went to work in the sardine factories.

A decrease will be found in the catch of cod, but a small increase in the catch of pollock, with prices for both these fish very much higher than previous seasons. At the fishing meeting held at Grand Harbour at the beginning of December, I was surprised to hear one of the witnesses state that pollock was a bad fish and worthless, and should be classed with dogfish and exterminated. It is true to a certain extent that they drive herring, but other fish are equally guilty.

A small increase in the catch of halibut will be noticed, but very few vessels fit out for this fishery.

The price of fish oil was very much higher than former years, and quite an income is realized in the dulse industry by many of our fishermen, which brings them good prices, and a market is readily found.

Boatman Silas Mitchell, of Campobello, who patrols the Coffil's Ledge fishing grounds in the Quoddy river, in his annual report states that he has carefully patrolled the river with an assistant and effectually prevented any American boats from crossing the boundary line and fishing in Canadian waters. There was a large fleet of boats fishing during the summer on the United States side of the boundary line, and could be seen daily hovering around the better fishing grounds on the Canadian side.

Cod struck in the river on March 19, and good catches are still being made when the weather permits, although the catch during the season has not been up to the standard of 1902.

The catch of haddock has been better than for a number of years, and the men who have been engaged in this fishery have realized a better year's work than ever before.

The pollock catch has been fairly good, but not equal to that of 1902, but the price received by the fishermen for pollock exceeded that of any previous year.

The lobster catch was quite small in the part of the river that I control. The close season was fairly well observed, and very little illegal fishing was attempted.

Only three United States fishing vessels have been at Eastport during the season seeking bait, namely the *New England*, on April 27, *Uncle Joe*, May 1, and *Jubilee*, May 6.

I have the honour to be, sir,
Your obedient servant,

JOHN H. PRATT,
Inspector of Fisheries.

DISTRICT No. 2.

MONCTON, N.B., February 12, 1904.

To the Dominion Commissioner of Fisheries,
Ottawa.

SIR,—I have the honour to submit my report of the Fisheries in District No. 2 of the province of New Brunswick consisting of the *counties of Restigouche, Gloucester, Northumberland, Kent, Westmorland and Albert*, together with the *Parish of Stanley in the county of York, and the parish of Aberdeen, in the county of Carleton*, for the year 1903, with tabulated statement, giving the products and values by districts and counties, together with an estimate of the capital employed in the prosecution of these fisheries.

These returns show a considerable increase in the aggregate values over those of last year, but this is at least in part made up by the increased prices for lobsters, herring and oysters.

I will now briefly refer in detail to the several kinds of fish caught.

SALMON.

Though good catches were made at some places the totals are considerably below those of 1902, owing, the fishermen say, largely to the prevalence of unfavourable winds, these fish were reported plentiful in the rivers during spawning time last fall, but something should be done in the case of the Nipisquit river by reserving a portion thereof for breeding purposes, there being only about 18 miles from tidal water to Grand Falls and every pool of this distance is fished right up to close time, it is entirely different with the Miramichi and Restigouche rivers which have large tributaries running away into the forests where fish are scarcely disturbed.

SHAD.

The catch in the Bay of Fundy is smaller than ever, I see there is some talk of hatcheries, but if a close time were made to allow these fish to ascend the St. John river undisturbed and not be slaughtered as they are when full of spawn, there would, I am satisfied, be little need of artificial help.

HERRING.

Immense quantities were taken last spring for every purpose, including increased numbers for smoking, on the Caraquet and Miscou banks where they are caught in the early fall and are very much fatter than the spring run, all that is wanted is a better method of curing to insure ready and profitable sales. These were very plentiful last season.

MACKEREL.

The catch was not quite up to that of 1902, as these fish are erratic in their movements on our coasts very little preparation is made for this fishery except in two or three places.

COD.

Notwithstanding the dogfish nuisance which interfered largely with this fishery latter part of the season, especially in the case of the Caraquet fleet, the quantity taken

SESSIONAL PAPER No. 22

on the whole coast is pretty nearly up to that of the previous year and prices were very high.

BASS.

The quantity taken is again very small, but immense quantities of them were reported last fall in our rivers and on our coast of from $\frac{1}{2}$ lb. to 1 lb. in weight, which speaks well for the future.

SMELTS.

The catch reported is about the same as previous year, but high prices were paid making this fishery in many cases very profitable, a single net in a few days earning several hundreds of dollars, and although on account of weather or other local causes good fishing may not always be had, these fish are certainly not decreasing or being fished out, in fact there is scarcely a doubt that many more are devoured by other fish than are taken by every means, although the catch in this district runs from three to four thousand tons every year.

LOBSTERS.

There is quite a marked increase in the pack of these fish in past year nearly every where on our coast, mainly owing to the greater care taken in preserving the berried lobsters for some years past, in many instances the leading packers assist the officers in carrying out the regulations governing this very important matter.

OYSTERS.

Not quite as many were raked as in 1902, notwithstanding some 800 barrels were taken from the reserved beds in Shediac harbour. This is again altogether due to the little interest taken in the Miramichi river fishery where they are of inferior quality and in good times other fishing and employment generally pays better.

CLAMS.

Large quantities still continue to be taken and shipped to the United States, principally from Kent county, thousands of barrels are also canned by Messrs. A. & R. Loggie, at Inkerman, in Gloucester county.

I have the honour to be, sir,
Your obedient servant,

R. A. CHAPMAN,
Inspector.

DISTRICT No. 3.

COMPRISING THE COUNTIES OF KING'S, QUEEN'S, SUNBURY,
YORK, CARLETON AND VICTORIA.

MAUGERVILLE, N.B., Feb. 6, 1904.

To the Dominion Commissioner of Fisheries,
Ottawa.

SIR,—I have the honour to submit my second annual statistical report on the Fisheries of District No. 3 N.B., for the year 1903, showing the quantity and value of fish taken, also the materials and value of same used in connection therewith.

A comparative statement, showing the difference in value of fish and materials between 1902 and 1903, is also given herewith viz. :—

Value of Fish.

For 1902.....	\$57,204.00
“ 1903.....	61,484.00
<hr/>	
• An increase in favour of 1903 of.....	\$4,280.00

Value of Materials.

For 1902.....	\$56,585.00
“ 1903.....	51,564.00
<hr/>	
A decrease for 1903 of.....	\$5,021.00
<hr/>	

While the increase in value of fish is not great, it is, to some extent gratifying, wherein it shows that the rivers and lakes are not being depleted of fish and that a considerable revenue and an immense amount of pleasure is to be derived from the pursuit of the ‘finny tribe.’ A source of revenue in connection with the fisheries, particularly in my district, of which it is difficult to appraise the value, is the distribution of money by foreign sportsmen, who visit frequently and spend freely.

The decrease in value of materials is not so gratifying, but it is, probably, not caused so much by deterioration of materials, (for it is principally nets, boats and canoes that show less value,) as in estimating the value of same.

SALMON.

A slight falling off in the quantity of this, the most valuable fish caught in this district, can scarcely be attributed to a smaller run, or less of them passing up the St. John river, in fact I think I can disprove any statement to that effect, by evidence which I will submit with this report, from one who is in a position to know the facts. I feel safe in saying that the decrease in quantity taken is the result of better protec-

SESSIONAL PAPER No. 22

tion, made possible by your department giving me an extra guardian the first of the season and two the latter part of it, whereby considerable illegal fishing was prevented. The surface fly fishing on the Tobique river was grand the past season, and those who could afford the pleasure were delighted with the result.

This of course, depends for its supply of salmon on the number that gets up the St. John, which in turn depends on the Tobique, for in that river are about all the spawning beds, in fact I may say 'all.' (There are other rivers, tributaries of the St. John, which with improved dams, would no doubt, be excellent salmon streams.)

SHAD.

The very large increase in quantity of this fish taken is pleasing. It comes chiefly from Queen's county, where they seem to have fairly swarmed in the great rivers and lakes of that county. The large amount used in the fresh state is noticeable. The supply for market does not nearly equal the demand.

TROUT.

This is, of course the people's fish. While they are fished chiefly for sport, many families of the poorer class often find it very convenient to be able to go to a nearby brook and with the help of baited hook, return in a short time with enough of the 'little beauties' for a meal. The return of the quantity of trout caught would indicate that some of the lakes and streams still have quite a supply. Here I might mention the very commendable action taken by the provincial government of New Brunswick in establishing a trout hatchery in the province. There are yet many lakes in this district seemingly without fish, which could they be examined by an expert, might be found suitable for trout and now that there is a chance to get a supply, I would suggest that your department have some of these lakes examined.

PICKEREL.

The statistical return of pickerel indicates that this industry is prosecuted quite industriously. They seem to be confined to the waters of the lower river counties, and it is well, I think they should never be introduced in the upper section of the province. There may be profit, but no pleasure, in fishing them. Nearly all are exported.

HERRING.

These fish do not come far up the St. John river, being reported only from King's county, where a limited quantity is taken. The catch shows a slight increase over last year.

ALEWIVES.

Considerable decrease is shown in the value of these fish, which is almost wholly accounted for by the lower rate (per barrel) at which they are quoted. They were rated at \$4 last year, while the price is given as \$3 this season. There are immense quantities in the lower section of the district, in their season, but the market has been dull for a year or two, consequently this part of the fishery is not prosecuted with as much vigour as would be the case were prices better. Fishermen report a prospect of better prices for 1904.

4-5 EDWARD VII., A. 1905

WHITEFISH.

The catch of whitefish shows a considerable increase, (comparatively) over 1902. The increase is all in Victoria county, while King's shows a decline. None reported from any other part of my district, unless as Overseer Hetherington, for Queen's county, east, says, Lake Ontario herring are called whitefish. He says some of those are caught in his district, weighing about $\frac{3}{4}$ lb.

BASS.

Bass fishery does not count for much at the present time, in my district. A small quantity are caught in King's county, but the fishery officers in that county report it almost a failure. There are very few applicants for bass licenses, and only one outside of King's.

STURGEON.

A gratifying increase is noticeable in the amount of sturgeon caught, although the quantity is small beside what I hope to see it in a few years. True there were more licenses issued in 1903, but one fisherman says sturgeon fishing was three times as good, as in 1902. Most of those caught were undersized, about five feet in length and weighing 40 or 50 pounds. This leads one to wonder if it is not advisable to begin to consider a change in regulations, longer close season, larger mesh, &c. I hope to see these fish protected by a stringent law, for they would certainly be a most valuable asset to our fishermen, should they become as plentiful as they were a few years ago in the St. John river.

Caviare sold readily at 90 cents per pound, for export.

SYNOPSIS OF FISHERIES OFFICERS' REPORTS.

King's County.

Guardian Perlee, Sussex, says trout fishing in this district seems to be improving. He had some trouble with mill owners but after a final warning the troublesome persons took care of the sawdust.

Guardian Coggan, Sussex, reports trout fishing poor first of season on account of cold, wet weather, but good later on.

Guardian Myers, Norton Station, reports the Fishery Law well observed in his district.

Guardian McCready, Penobsquis, reports trout fishing excellent in his district.

Guardian Jenkins, Kars, reports bass fishing almost a failure, other fishing fair, and the law strictly observed.

Guardian Belyea, Lilly Lake, reports salmon fishing better than last year.

Guardian Dunham, Grey's Mills, reports sturgeon fishing much better than last year, sturgeon poor.

Queen's County, East.

Overseer Hetherington, Johnston, reports the Fishery Law much better observed now than formerly. Salmon more plentiful than for years, but complains of what he terms the 'unjust restrictions' with regard to the issuing of salmon licenses. Trout fishing was on the increase.

Overseer Belyea, Gagetown, (Queen's west) says fishing appears to have received more attention in 1903 than last year. Shad, alewives and pickerel are the principle fish caught and returns quite satisfactory. The law well observed. No report than statistics, from Sunbury and York county officers.

SESSIONAL PAPER No. 22

Carleton County.

Guardian Blake, Woodstock, on St. John river, reports salmon more plentiful than usual and some illegal fishing.

Guardian Brooks, Bristol, on St. John river, reports salmon very plentiful, with less desire seemingly, on the part of residents to poach.

Guardian Briggs, Belleville, on Madurnakeg river, reports salmon and trout more plentiful than in 1902.

Overseer Wilson, Grand Falls, Victoria county, reports a gratifying increase in the run of salmon in the St. John and Tobique rivers. Through the watchfulness of himself and guardians the Fishing Law was well observed, very little illegal fishing being done.

In conclusion, I wish to prove my assertion regarding the increase of salmon, by inclosing a copy of a letter from the superintendent of the 'Tobique Salmon Club' to Overseer Wilson. Mr. Allen, a citizen from the United States has for years looked after the interest of the club. In connection with the fishing on the Tobique, Mr. Allen requests that I mention the urgent necessity for some action in regard to the destruction of the 'Brown Breasted Merganser'. A duck very numerous in that section and which lives the whole summer on small fish, no doubt destroying many valuable ones. In connection with this letter, which I trust you will include in my report, it is interesting to note what Mr. Allen says regarding surface-fly-fishing in the vicinity of Grand Falls, the limit for salmon ascending the St. John river.

I have the honour to be, sir,
Your obedient servant,

H. E. HARRISON,
Inspector of Fisheries.

Extract from a report to the local Fishery Overseer by Mr. T. F. Allen, head warden of the Tobique Salmon Club.

'As to the fishing on the Tobique river the past season, I am pleased to say that it was the best in the history of the Tobique Salmon Club. This was due principally to the improvement in the protection of the fish in the non-tidal waters of the St. John. Without such assistance, very few salmon would be able to pass the numerous nets such as would be in use, unless compelled to abide by the laws in connection with such protection, by the Dominion Government on the St. John river. The salmon are well protected after they enter the Tobique river. Twenty men residents of the vicinity, are constantly on duty as wardens on the Tobique river, from June 1st to Nov. 1st. While the season for taking salmon expires Aug. 15, the wardens are retained to protect the fish through the spawning season, and until they leave that stream on their return to the sea, these guardians are retained at the expense of the Tobique Salmon Club.

'The fry placed in the Tobique river each season from the Dominion Hatchery, at Grand Falls, are undoubtedly a great benefit in supplying a stock of salmon for the river.

'During the present season, there were more salmon in the Tobique river for spawning, (after the season closed for taking them,) than I ever saw at one time; they could be counted by the thousand. This means a grand supply for the future.

'A grand feature in connection with the fishing of the past season, was that at no time after the salmon arrived was there a day before the close of the season, but salmon

4-5 EDWARD VII., A. 1905

could be taken with a fly as far as the condition of the water was concerned. We had some rain, but not enough at any time to put the river above a fishing pitch or make it so dirty that a fish could not outline a fly distinctly. This is very remarkable, as usually we have a late June freshet in the Tobique region. I am also pleased to state that the residents take kindly to the enforcement of the laws as to the protection of the salmon; but one case of poaching was reported to me the past season, and as usual for first offence and promise of good behaviour in the future, this party was fined but a trifling sum.

'The members of the Tobique Salmon Club and their guests killed about three hundred and twenty-five fish, including salmon, and grilse, and in private pools controlled by Lord Strathcona, and residents on the river, there were many fish killed, the exact number I cannot state.

'With the increase of salmon, many new pools are being discovered on Tobique river, principally on property controlled by the inhabitants and they are bringing sportsmen to the river to fish, the same making employment for many men as guides at a time when they are at leisure between planting and harvesting their crops.

'As to the future of the St. John river in the vicinity of Grand Falls, I will venture to say, that with proper protection of the non-tidal waters of that river, the salmon can be taken with the fly below the falls, to such an extent as will bring many sportsmen to that place for such fishing.

'Your visit to Plaster Rock, I hoped, would cause the improvements desired, and required in the fishway at that point, but as yet nothing has been done. I suppose this is on account of the property being in litigation. In order to give the salmon a free and easy passage over the structure, the buckets should be high enough so the water passing through the fishway should follow from one pond to another, without flowing over the tops of the buckets, thus spoiling the principal effect of the fishway.

'This fall the salmon remained in the pond for a long time while on their way to the sea, on account of the clogging of the fishway with driftwood and bark, caused by the top of the pier built above the fishway being gone. This pier was ordered built there by the government for the protection of the fishway and if kept at a proper height, no driftwood can enter the fishway. I hope you will be able to have such repairs completed the coming winter.

'I am frank in saying, that with proper protection of the non-tidal waters of the St. John river, the fly fishing on the Tobique river and upper St. John, in the vicinity of Grand Falls, will not be surpassed in any river in New Brunswick.'

RETURN showing the Kinds and Quantities of Fish, &c., in the Counties of St. John and Charlotte, Province of New Brunswick, for the Year 1903—Continued.

Fishing Districts.	Kinds of Fish.												Number.					
	Salmon, fresh, lbs.	Herring, kippered, cans.	Herring, salted, brls.	Herring, fresh, lbs.	Herring, smoked, lbs.	Scallops, in shell, brls.	Scallops, canned, cans.	Polsters, preserved in cans, lbs.	Loose, fresh in shell, cwt.	Chick, fresh, cwt.	Chick, fresh, lbs.	Haddock, fresh, lbs.		Haddock, smoked, cwt.	Haddock, smoked, human habitable, lbs.	Hake, fresh, cwt.	Hake, smoked, lbs.	Pollock, cwt.
Charlotte County.																		
1 Lepreau to Red Head.	2000	85000	50	72000			6200	48000	950	40	75000	73000	620	10	50	4100	420	40
2 Red Head to Letang.			13	100000					750	320	221000	100000	20		40	35	2000	
3 Letang to St. George.		9000	140	20000	45000				440	50	17000	240000				600	100	
4 St. George to St. Stephen.		83300	7800	1100000	1880000	750		36800	3170	2890	251000	75000	270		1000	2800	6500	
5 Grand Manan.			640	6000	14000			15000	270	260		803000	61		1500	2100	7100	
6 Campbell.				10000					300	200	5000	100000			100		1500	
7 West Isles.																		
8 St. George and vicinity.																		
Totals.	2000	177300	8643	1308000	1939000	750	6200	99800	7180	3910	504500	1391000	981	140900	8390	9635	20650	
St. John County.																		
1 St. John Harbour.	100000																	
2 Lepreau to Chance Harbour.	17900		150	10000					320	90		18000			300	120		
3 Chance Harbour to Mispec.	135000		500						950	1000		50000			1200	1400	100	
4 Mispec to Tynemouth Creek.									720	5							39	
5 Tynemouth Creek to Albert Co.	600		100	2000					320	10							15	
Totals.	253500		550	12000					2340	1105		68000			1500	1820	151	
Grand totals.	255500	177300	9193	1320000	1939000	750	6200	99800	9490	5015	504500	1459000	981	140900	9890	11455	20814	

RETURN showing the Kinds and Quantities of Fish and Fish Products, in the Counties of St. John and Charlotte, Province of New Brunswick, for the Year 1903--Continued.

Fishing Districts.	Kinds of Fish.										Fish Products.					TOTAL VALUE OF ALL FISH. \$	Number.	
	Halibut, lbs.	Trout, lbs.	Shad, brls.	Smelts, lbs.	Alewives or Gas- pereau, brls.	Eels, brls.	Sardines, canned, cans.	Sardines, brls.	Tom Cod or Frost Fish, lbs.	Squid, brls.	Fish Oil, galls.	Fish as bait, brls.	Fish as manure, brls.	Clams, in shell, brls.	Clams, canned, cans.			Dulse, lbs.
Charlotte County.																		
1 Lepreau to Red Head.....	2500		60					1374000	15050			260	1000		5600	123000	3600	60,096 50
2 Red Head to Letang.....									4300			3600	550	3300	406	7000	6000	140,900 00
3 Letang to St. George.....				1300				1570000	43500	30	330	660			24	1100		192,269 00
4 St. George to St. Stephen.....				900					35500			5600	100		1900	52800	1000	100,557 50
5 Grand Manan.....	10000								4200			7600	4000				40000	199,380 00
6 Campobello.....	11200			2500					14000	348			600	80				85,997 50
7 West Isles.....		7000		1500	25			7500	23500				500		25	29000		67,475 00
8 St. George and vicinity.....																		1,175 00
Totals.....	23700	7000	60	6200	25		2951500		140050	378	17390	7410	3380	7955	2129000		50600	847,850 50
St. John County.																		
1 St. John Harbour.....			800		8500	70			30000				4000					128,700 00
2 Lepreau to Chance Harbour.....									150		850	150						10,165 00
3 Chance Harbour to Mispec.....	200		60	500	100				9800		2000	500	1000					69,945 00
4 Mispec to Tynemouth Creek.....																		7,300 50
5 Tynemouth Creek to Albert Co.....																		3,865 00
Totals.....	200		860	500	8600	70			39950		2850	4650	1000					219,975 50
Grand totals.....	23900	7000	920	6700	8625	70	2951500		180000	378	20240	12060	4380	7955	2129000		50600	1,067,826 00

RECAPITULATION

OF the Yield and Value of the Fisheries in District No. 1, New Brunswick, comprising the Counties of St. John and Charlotte, for the Year 1903.

Kinds of Fish.	Quantity.	Price.	Value.
		\$ cts.	\$ cts.
Salmon, fresh in ice.....Lbs.	255,500	0 20	51,100 00
Herring, kippered, in.....Cans.	177,300	0 10	17,730 00
" salted.....Brls.	9,193	4 50	41,368 50
" fresh or frozen.....Lbs.	1,320,000	0 01	13,200 00
" smoked.....Lbs.	1,939,000	0 02	38,780 00
Scallops in shell.....Brls.	750	2 00	1,500 00
" canned.....Cans.	6,200	0 15	930 00
Lobsters, fresh.....Cwt.	9,490	10 00	94,900 00
" canned.....Cans.	99,800	0 25	24,950 00
Cod, dried.....Cwt.	5,015	4 50	22,567 50
" fresh or frozen.....Lbs.	504,500	0 04	20,180 00
Haddock, fresh.....Lbs.	1,459,000	0 03	43,770 00
" dried.....Cwt.	981	3 00	2,943 00
" smoked, finnan haddies.....Lbs.	140,900	0 06	8,454 00
Hake, dried.....Cwt.	9,890	2 25	22,252 50
" sounds.....Lbs.	11,455	0 50	5,727 50
Pollock, dried.....Cwt.	20,814	2 00	41,628 00
Halibut, fresh.....Lbs.	23,900	0 10	2,390 00
Trout.....Lbs.	7,000	0 10	700 00
Shad.....Brls.	920	10 00	9,200 00
Snelts.....Lbs.	6,700	0 05	335 00
Alewives.....Brls.	8,625	4 00	34,500 00
Eels.....Brls.	70	10 00	700 00
Sardines, canned.....Cans.	2,951,500	0 05	147,575 00
" fresh.....Brls.	180,000	2 00	360,000 00
Dulse.....Lbs.	50,600	0 06	3,036 00
Tomcod or frost fish.....Lbs.	10,000	0 03	300 00
Squid.....Brls.	378	4 00	1,512 00
Fish oil.....Galls.	20,240	0 30	6,072 00
Fish as bait.....Brls.	12,060	1 50	18,090 00
" manure.....Brls.	4,380	0 50	2,190 00
Clams in shell.....Brls.	7,955	1 00	7,955 00
" canned.....Cans.	212,900	0 10	21,290 00
Total value of catch for 1903.....			1,067,826 00
" " 1902.....			1,064,126 20
Value of increase for 1903.....			3,669 80

SESSIONAL PAPER No. 22

RECAPITULATION

OF the Number and Value of Vessels, Boats, Nets, Weirs, &c., engaged in the Fisheries of District No. 1, New Brunswick, comprising Counties of St. John and Charlotte, for the Year 1903.

Number.	Material.	Value.	
		\$	cts.
126	Vessels, tonnage 2130.....	54,025	00
1,679	Boats.....	63,449	00
2,462	Gill nets, fathoms 162,644.	26,896	00
511	Seines " 15,765.	34,107	00
824	Trawls.....	5,368	00
457	Weirs.....	217,526	00
20	Smelt nets.....	160	00
1,798	Hand lines ...	1,124	00
5	Lobster canneries.....	12,500	00
92,269	" traps	20,157	00
10	Freezers and ice houses.....	4,000	00
830	Smoke and fish houses.....	141,640	00
304	Piers and wharfs	73,980	00
41	Tugs and smacks.....	15,275	00
5	Sardine factories.....	11,000	00
7	Fish curing houses.....	10,000	00
154	Weir scows.....	8,000	00
90	Pile drivers.....	8,000	00
25	Fish presses	3,000	00
16	Clam canneries.....	600	00
1	Fish guano factory	5,000	00
	Total value of material.....	746,807	00

4-5 EDWARD VII., A. 1905

NEW BRUNSWICK—

RETURN showing the Number, Tonnage and Value of Vessels, Boats,

Number.	DISTRICTS.	FISHING VESSELS AND BOATS.						FISHING.		
		Vessels.				Boats.		Gill		
		Number.	Tonnage.	Value,	Men.	Number.	Value.	Men.	Number.	Fathoms.
<i>Restigouche County.</i>										
1	Above Dalhousie.....	2	37	1500	8	30	600	35	23	8520
2	Below Dalhousie.....	2	37	1500	8	290	4000	370	140	19100
Totals.....		2	37	1500	8	320	4600	405	163	27620
<i>Gloucester County.</i>										
3	Beresford and front of Bathurst.....	2	22	1600	8	435	10000	880	1500	50500
4	Caraquet, New Brandon and part of Bathurst.....	126	1450	52000	420	550	16500	1020	1950	67000
5	Saumarez, Inkerman and Shippegan mainland.....	24	260	9500	100	255	7000	500	4000	100000
6	Shippegan and Miscou Islands.....	65	795	32500	235	465	20000	950	1100	35000
Totals.....		217	2527	95600	763	1705	53500	3350	9550	252500
<i>Northumberland County.</i>										
7	Neguac and vicinity.....	3	33	1250	10	210	7000	300	620	50000
8	Bay du Vin and vicinity.....	2	30	900	6	250	7500	450	800	80000
9	Chatham and vicinity.....	..	..	..	..	150	4000	160	400	35000
10	Southwest and Northwest Miramichi Rivers.....	..	..	..	..	130	2260	140	375	15000
Totals		5	63	2150	16	740	20700	1050	2195	180000
<i>Kent County.</i>										
11	Richibucto, St. Louis and Carleton.....	..	..	..	..	311	10440	460	4250	80500
12	Buctouche and vicinity.....	..	..	..	..	520	15000	820	3250	70000
13	Cocagne and vicinity.....	..	..	..	..	310	8500	450	1000	28000
Totals.....		..	..	..	..	1141	33940	1730	8500	178500
<i>Westmorland County.</i>										
14	Shediac, Moncton and Salisbury.....	..	..	..	..	360	10000	650	700	35000
15	Botsford.....	..	..	..	..	450	13000	750	600	18000
16	Sackville and Westmorland.....	..	..	..	..	225	5000	300	350	8000
17	Dorchester.....	..	..	..	..	30	1800	60	160	7000
Totals.....		..	..	..	..	1065	39800	1760	1810	68000
18	<i>Albert County</i>...	..	..	..	..	6	200	8	10	1500
Grand totals		224	2627	99250	787	4977	142740	8503	22230	708200

SESSIONAL PAPER No. 22

District No. 2.

Nets, &c., in District No. 2 Province of New Brunswick, for the year 1903.

GEAR OR MATERIALS.					KINDS OF FISH.											
Nets.	Trawls.		Smelt Nets		Lobster canneries, number.											
Value.	Number.	Value.	Number.	Value.		Salmon, fresh, lbs.	Salmon, preserved in cans, lbs.	Salmon, smoked, lbs.	Herring, salted, brls.	Herring, fresh, lbs.	Herring, smoked, lbs.	Mackerel, fresh, lbs.	Mackerel, salted, brls.	Lobster, preserved in cans, lbs.	Lobster, fresh in shell, cwt.	Number.
£		£		£												
7000	....	....	128	6500	....	62000	....	....	....	....	....	....	....	....	120	1
17000	....	....	23	2000	2	125600	....	....	1400	300000	46400	....	....	37072	1355	2
24000	....	....	151	8500	2	187600	....	....	1400	300000	46400	....	....	37072	1475	
31000	2	40	....	....	5	106000	400	500	10000	200000	12000	4000	15	12640	350	3
38000	200	800	54	2600	17	200000	....	....	38000	120000	....	15000	20	245800	450	4
35500	20	100	226	7000	7	52000	....	....	10000	20000	....	15000	25	88400	200	5
13000	100	450	42	1900	32	....	4000	1000	14000	50000	....	15000	20	445200	150	6
117500	322	1390	322	11500	61	358000	4400	1500	72000	390000	12000	49000	80	792040	1150	
45000	....	....	190	15200	9	100000	....	....	4000	20000	15000	2000	10	72000	200	7
70000	....	....	250	15000	3	70000	....	....	2600	10000	10000	200000	100	51500	200	8
30000	....	....	350	26000	1	92000	....	....	120	10000	....	2000	....	....	....	9
8000	....	....	....	....	....	90000	....	3000	....	....	....	....	....	....	....	10
153000	....	....	790	56200	13	352000	....	3000	6720	40000	25000	204000	110	123500	400	
14340	40	800	330	13200	12	46500	500	1300	14400	90000	....	220000	240	183760	380	11
15600	....	....	270	11000	23	....	....	....	10000	150000	....	1000	....	160000	200	12
4000	....	....	62	2500	5	....	....	....	7000	40000	....	2000	10	19500	150	13
38940	40	800	662	26700	40	46500	500	1300	31400	280000	....	223000	250	363260	730	
15000	....	....	150	7500	28	2500	....	....	27000	600000	2000000	4000	....	216000	300	14
6000	....	....	60	1800	50	....	....	....	10000	1000000	660000	2000	....	500000	2000	15
2500	....	....	46	1200	....	500	....	....	1200	50000	5000000	1000	....	5000	2000	16
3000	....	....	....	....	....	3000	....	....	100	....	....	....	....	....	....	17
26500	....	....	256	10500	78	6000	....	....	38300	1650000	7660000	7000	....	721000	4300	
700	....	....	....	....	....	2800	....	....	200	3000	....	....	....	....	....	18
360640	362	2190	2181	113400	194	952900	4900	5800	150020	2663000	7743400	483000	440	2036812	8055	

RETURN showing the Quantity and Value of

Number.	DISTRICTS.	KINDS OF FISH						
		Cod, dried, cwt.	Cod, tongues and sounds, brls.	Haddock, dried, cwt.	Hake, dried, cwt.	Hake, sounds, lbs.	Halibut, lbs.	Trout, lbs.
								Shad, brls.
	<i>Restigouche County.</i>							
1	Above Dalhousie	20	.....	.....	.....	.....	.....	5000
2	Below Dalhousie	30	.....	.....	.....	.....	.....	4500
	Totals	50	.....	.....	.....	.....	.....	9500
	<i>Gloucester County.</i>							
3	Beresford and part of Bathurst	2500	.....	.....	160	.....	.....	9000
4	Caraquet, New Bandon and part of Bathurst	41500	150	.....	1200	1600	55000	12500
5	Saumarez, Inkerman and Shippegan mainland	10000	20	1000	2000	1500	10000	4000
6	Shippegan and Miscou Islands	24000	80	.....	1600	2000	30000	500
	Totals	78000	250	1000	4960	5100	95000	26000
	<i>Northumberland County.</i>							
7	Neguac and vicinity	800	.....	1000	800	500	2000	6000
8	Bay de Vin and vicinity	3000	.....	200	200	.....	2000	1100
9	Chatham and vicinity	400	.....	300	200	.....	.....	5000
10	South-west and North-west Miramichi Rivers .....	.....	.....	.....	.....	.....	.....	25000
	Totals	4200	.....	1500	1200	500	4000	37100
	<i>Kent County.</i>							
11	Richibucto, St. Louis, Carleton, &c.	2100	.....	200	2000	880	4700	3300
12	Buctouche and vicinity	50	.....	.....	300	.....	.....	2200
13	Cocagne and vicinity	50	.....	.....	100	.....	.....	2600
	Totals	2200	.....	200	2400	880	4700	8100
	<i>Westmorland County.</i>							
14	Shediac, Moncton and Salisbury	50	.....	.....	40	.....	.....	14000
15	Botsford .....	.....	.....	.....	200	.....	.....	8000
16	Sackville and Westmorland .....	.....	.....	.....	.....	.....	.....	1500
17	Dorchester .....	.....	.....	.....	.....	.....	.....	2200
	Totals	50	.....	.....	240	.....	.....	25700
18	<i>Albert County.</i>	40	.....	.....	.....	.....	.....	9500
	Grand totals	84540	250	2700	8800	6480	103700	115900

SESSIONAL PAPER No. 22

Fish, &c.—New Brunswick—Continued.

AND FISH PRODUCTS.														TOTAL VALUE OF ALL FISH.	Number.
Smelts, lbs.	Alewives or Gaspereau, brls.	Bass, lbs.	Belts, brls.	Oysters, brls.	Clam, brls.	Flounders, lbs.	Tom cod or frost fish, lbs.	Squid, brls.	Coarse and mixed fish, brls.	Fish oil, galls.	Fish as bait, brls.	Fish as manure, brls.	Seal skins, number.		
														\$ cts.	
226000	.....	.....	15	.....	.....	30000	20000	.....	80	.....	10	50	.....	26,860 00	1
42000	.....	1500	20	.....	20	1000	1500	.....	.....	20	300	400	.....	56,642 00	2
268000	.....	1500	35	.....	20	31000	21500	.....	80	20	370	450	.....	83,502 00	
5000	.....	1500	20	.....	7000	18000	14000	15	300	200	1400	20000	12	115,470 00	3
300000	.....	8000	200	650	2000	25000	150000	420	800	16000	10000	24000	20	542,561 00	4
560000	500	3000	150	100	5000	12000	15000	100	2500	2500	2000	5000	32	191,175 00	5
250000	.....	7000	100	60	2000	5000	15000	250	600	9000	11000	10000	24	340,550 00	6
1115000	500	19500	470	810	16000	60000	194000	785	4200	27700	24400	59000	88	1,189,756 00	
900000	150	5000	125	1250	350	10000	200000	.....	.....	200	700	1500	20	135,025 00	7
650000	500	4000	150	3000	250	20000	150000	.....	500	.....	4000	7000	.....	149,935 00	8
1660000	400	1400	35	1200	.....	30000	1000000	.....	.....	.....	20	200	.....	150,050 00	9
.....	1150	55000	460	.....	.....	.....	20000	.....	.....	.....	.....	.....	.....	49,400 00	10
3270000	2200	65400	770	5450	600	60000	1370000	.....	500	200	4720	8700	20	484,410 00	
1113000	1440	18100	850	860	450	35000	50000	20	250	750	2650	13500	16	261,695 00	11
600000	2000	500	150	2200	10000	.....	80000	.....	1200	200	5500	12000	.....	178,600 00	12
250000	400	2000	150	1800	6000	5000	50000	.....	500	50	1850	10000	.....	86,015 00	13
1963000	3840	20600	1150	4860	16450	40000	180000	20	1950	1000	10000	35500	16	526,310 00	
610000	400	3000	150	1000	1500	.....	20000	.....	800	.....	18000	46000	.....	320,295 00	14
360000	200	1000	100	200	2000	.....	10000	.....	.....	.....	30000	20000	.....	287,090 00	15
160000	150	2500	75	150	1000	.....	10000	1000	.....	.....	5000	5000	.....	149,170 00	16
.....	.....	.....	50	.....	.....	.....	3000	.....	100	100	.....	.....	.....	12,090 00	17
1130000	750	6500	375	1350	4500	.....	43000	1000	900	100	53000	71000	.....	768,645 00	
2500	.....	500	40	.....	10	.....	20000	.....	40	40	.....	.....	..	4,867 00	18
7748500	7290	114000	2840	12470	37580	191000	1828500	1805	7670	29060	92490	174650	124	3,057,490 00	

RECAPITULATION

OF the Yield and Value of the Fisheries in District No. 2, New Brunswick, for the Year 1903.

Kinds of Fish.	Quantity.	Price.		Value.
		\$	cts.	
Salmon, fresh.	Lbs. 952,900	0	20	190,580
" preserved in cans.	" 4,900	0	15	735
" smoked.	" 5,800	0	20	1,160
Herring, salted.	Brls. 150,020	4	50	675,090
" fresh.	Lbs. 2,663,000	0	01	26,630
" smoked.	" 7,743,400	0	02	154,868
Mackerel.	Brls. 440	15	00	6,600
" fresh.	Lbs. 483,000	0	12	57,960
Lobsters preserved.	Cans. 2,036,812	0	25	509,203
" in shell.	Cwt. 8,055	6	00	48,330
Cod.	" 84,540	4	50	380,430
" tongues and sounds.	Brls. 250	10	00	2,500
Haddock.	Cwt. 2,700	3	00	8,100
Hake.	" 8,800	2	25	19,800
" sounds.	Lbs. 6,480	0	50	3,240
Halibut.	" 193,700	0	10	10,370
Trout.	" 115,900	0	10	11,590
Shad.	Brls. 3,830	10	00	38,300
Smelts.	Lbs. 7,748,500	0	05	387,425
Alewives.	Brls. 7,290	4	00	29,160
Bass.	Lbs. 114,000	0	10	11,400
Eels.	Brls. 2,840	10	00	28,400
Oysters.	" 12,470	5	00	62,350
Flounders.	Lbs. 191,000	0	03	5,730
Frost fish or tom cod.	" 1,828,500	0	03	54,855
Squid.	Brls. 1,805	4	00	7,220
Coarse fish.	" 7,670	2	00	15,340
Fish oil.	Galls. 29,060	0	30	8,718
Fish as bait.	Brls. 92,490	1	50	138,735
Fish as manure.	" 174,650	0	50	87,325
Seal skins.	No 124	1	25	186
Clams.	Brls. 37,580	2	00	75,160
Total.				3,057,490

SESSIONAL PAPER No. 22

RECAPITULATION

OF the Number and Value of Vessels, Boats, Nets, Traps, &c., engaged in the Fisheries
in District No. 2, **New Brunswick**, in the Year, 1903.

Material.	Value.	Total.
	\$	\$
224 fishing vessels (2,627 tons)	99,250	
4,977 " boats	142,740	
708,200 fathoms gill nets	360,640	
2 mackerel trap nets	2,000	
362 trawls	2,190	
117 bass nets	920	
2,181 smelt nets	113,400	
5,380 hand lines	3,860	
		725,000
194 canneries	103,800	
218,180 lobster traps	199,380	
		303,180
187 freezers and ice houses	62,600	
361 fish and smoke houses	51,370	
45 piers and wharfs	27,900	
71 tugs and smacks	24,500	
819 smelt shanties	12,470	
		178,840
Total		1,207,020

RECAPITULATION.

RETURN showing the Kinds and Quantities of Fish in the District No. 3, comprising the Counties of King's, Queen's, Sunbury, York, Carleton and Victoria, Province of New Brunswick. for the Year 1903.

Kinds of Fish.		Quantity.	Price.	Value.
			\$ cts.	\$ cts.
Salmon, fresh.....	Lbs.	81,410	20 00	16,288 00
Shad, fresh.....	"	109,000	05	5,450 00
" salted.....	Brls.	830	10 00	8,300 00
Trout.....	Lbs.	95,700	10	9,570 00
Pickarel.....	"	117,900	07	8,253 00
Herring, salted.....	Brls.	300	4 50	1,350 00
" fresh and smoked.....	Lbs.	30,000	02	600 00
Alewives, salted.....	Brls.	2,300	3 00	6,900 00
" fresh and smoked.....	Lbs.	38,500	02	770 00
Whitefish.....	"	9,700	15	1,455 00
Bass.....	"	500	08	40 00
Eels.....	Brls.	70	10 00	700 00
Sturgeon.....	Lbs.	6,000	08	480 00
Coarse and mixed fish.....	Brls.	450	2 00	900 00
Caviare.....	Lbs.	475	90	428 00
Total value of fish for 1903.....				61,484 00
" " 1902.....				57,204 00
Increase for 1903.....				4,280 00

NOTE.—For the quantities of fish by counties, see p. 123.

RECAPITULATION

Of the Number of Fishermen, Tonnage and Value of Vessels, Boats, Nets and other Materials in the Fishing Industry in District No. 3, Province of New Brunswick, for the Year 1903.

Materials.	Value.	Totals.
	\$ cts.	\$ cts.
2 vessels (80 tons) { 1,278 men employed. }	700 00	
732 boats and canoes .	10,144 00	
1833 gill nets, 54,080 fathoms.....	24,620 00	
1635 rods and lines.....	4,450 00	
50 eel traps.....	50 00	39,964 00
168 cottages, smoke and ice houses.....	11,600 00	11,600 00
Total value of material for 1903.....		51,564 00
" " 1902.....		56,585 00
Decrease for 1903....		5,021 00

NOTE.—For details by localities see recapitulation, p. 121.

RECAPITULATION showing the Number, Tonnage and Value of Vessels, Boats, Nets and of all Fishing Materials and other Fixtures used in the Fishing Industry of the Province of **New Brunswick**, for the Year 1903.

SESSIONAL PAPER No. 22

FISHING VESSELS AND BOATS.														FISHING GEAR OR MATERIALS.													
Vessels.				Boats.				Gill Nets.				Seines.				Trap Nets.				Trawls.				Weirs.			
Number.	Tonnage.	Value.	Men.	Number.	Value.	Men.		Number.	Fathoms.	Value.	Number.	Fathoms.	Value.	Number.	Value.	Number.	Value.	Number.	Value.	Number.	Value.	Number.	Value.				
District No. 1.																											
1	Charlotte	114	1902	49350	351	1370	48975	1197	914	22142	8189	181	12978	29940		605	5251	409	206500	1							
2	St. John	12	228	4675	53	309	14474	470	1548	140502	18707	30	2787	4167		219	1117	48	11026	2							
District No. 2.																											
3	Albert					6	200	8	10	1500	700									3							
4	Westmorland					1065	29800	1760	1810	68000	26500									4							
5	Kent					1141	33940	1730	8500	178500	38940					40	800			5							
6	Northumberland	5	63	2150	16	740	20700	4050	2195	180000	153000									6							
7	Gloucester	217	2527	95600	763	1705	53500	3350	9550	232500	117500					2	2000	322	1300	7							
8	Restigouche	2	37	1500	8	320	4600	405	163	27020	24000									8							
District No. 3.																											
9	Victoria					140	1550	190	6	100	60									9							
10	Carleton					45	450	100	35	1050	280									10							
11	York					163	1956	350	300	10500	4500									11							
12	Sunbury	1	40	400	4	60	1000	100	300	10370	3000									12							
13	Queen's	1	40	300	2	224	2688	332	692	17060	6180									13							
14	King's					100	2500	200	500	15000	10000									14							
Totals								352	4837	153975	1200	7388	216333	11242	26523	924844	412156	511	15765	34107	2	2000	1186	8558	457	217526	

RECAPITULATION showing the Number, Tonnage and Value of Vessels, Boats and other Fishing Materials, &c.,
New Brunswick—Continued.

FISHING GEAR OR MATERIALS— <i>Con.</i>				LOBSTER PLANT.				OTHER FIXTURES USED IN FISHERIES.											
FISHING COUNTIES.				Canneries.				Traps.		Persons employed in canneries.		Freezers and Ice Houses.		Smoke and Fish Houses.		Piers and Wharfs.		Tugs, Steamers and Snacks.	
Smelt Nets.		Hand Lines.		Number.		Value.		Number.		Value.		Number.		Value.		Number.		Value.	
Number.	Value.	Number.	Value.	Number.	Value.	Number.	Value.	Number.	Value.	Number.	Value.	Number.	Value.	Number.	Value.	Number.	Value.	Number.	Value.
<i>District No. 1.</i>																			
1	Charlotte.	20	160	1673	1034	5	12500	17179	15101	75	6	1900	730	131800	222	66089	38	14675	
2	St. John.			125	90			5090	4753		4	2100	100	9830	82	7900	3	600	
<i>District No. 2.</i>																			
3	Albert.												1	20					
4	Westmorland.	256	10500	250	90	78	18000	66500	59100	1670	65	1300	90	14700	11	2600	2	2000	4
5	Kent.	662	26700	810	360	40	14200	38000	34600	820	18	8700	30	3400	15	2000	3	8000	5
6	Northumberland.	790	56200	170	250	13	14000	15000	13000	380	44	19400	114	12500	1	10000	18	6000	6
7	Gloucester.	322	11500	4100	3150	61	56000	94000	88000	1885	53	18200	124	19950	11	13100	11	4500	7
8	Restigouche.	151	8500	50	10	2	1600	4680	4380	61	7	15000	2	800	1	200	4	4000	8
<i>District No. 3.</i>																			
9	Victoria.												12	3300					9
10	Carleton.			300	600														10
11	York.			400	1600								31	4150					11
12	Sunbury.			100	200								20	400					12
13	Queen's.			250	500								70	1750					13
14	King's.			200	400								35	2000					14
Totals.		2201	113560	8813	9434	199	116300	240449	219537	4891	197	66600	1359	204610	349	101880	112	39775	

RECAPITULATION showing the Kinds and Quantities of Fish and Fish Products, &c.—New Brunswick—Continued.

COUNTIES.	KINDS OF FISH.																		Number.	
	Salmon, fresh, lbs.	Salmon, preserved in cans, lbs.	Salmon, smoked, lbs.	Herring, salted, brls.	Herring, fresh, lbs.	Herring, smoked, lbs.	Mackerel, fresh, lbs.	Mackerel, salted, brls.	Lobsters, preserved in -cans, lbs.	Lobsters, fresh in shell, cwt.	Cod, dried, cwt.	Cod, tongues and sounds, brls.	Haddock, fresh, lbs.	Haddock, dried, cwt.	Haddock, smoked thin- an haddies, lbs.	Hake, dried, cwt.	Hake, sounds, lbs.	Pollock, cwt.		Halibut, lbs.
District No. 1.																				
1 Charlotte	2000			8643	1308000	1933000			99800	7180	3910	1	1391000	981	110900	8390	9635	20660	23700	1
2 St. John	253500			550	12000					2310	1105		68000			1500	1820	151	200	2
District No. 2.																				
3 Albert	2800			200	3000	766000	7000		721000	4300	10					240	880		4700	3
4 Westmorland	6000			38300	1650000		223000	250	363260	730	50					2400			1000	4
5 Kent	46500	500	1300	31400	280000				123500	400	2200					1200	500			5
6 Northumberland	352000		3000	6720	40000	25000	204000	110			4200	250				1960	5100		95000	6
7 Gloucester	358000	4400	1500	72900	390000	12000	49000	80	792040	1150	78000									7
8 Restigouche	187600			1400	300000	46400			37072	1475	50									8
District No. 3.																				
9 Victoria	6000																			9
10 Carleton	13000																			10
11 York	37440																			11
12 Sunbury	2000																			12
13 Queen's	2000																			13
14 King's	21000			300		30000														14
Totals	1289840	4900	5800	159513	3983000	9712400	483000	440	2136612	17545	89555	250	1459000	3681	140900	18630	17935	20814	127600	
Values..	257968	735	1160	717808	39830	194248	37960	6600	534153	143230	402997	2500	43770	11047	8454	42052	8968	44628	12760	

+ Over half a million lbs. of fresh cod.

RECAPITULATION showing the Kinds and Quantities of Fish and Fish Products, &c.—New Brunswick—Concluded.

COUNTIES.	KINDS OF FISH.														Fish Products.		Total Value of All Fish.	Seal skins, number.	Number.	
	TROUT, lbs.	SHAD, bbls.	SMELTS, lbs.	ALWATES or GRASPERS, bbls.	BASS, lbs.	PICKEREL, lbs.	EELS, bbls.	SARDINES, bbls.	OYSTERS, bbls.	CODS, bbls.	FLOUNDERS, lbs.	TEN COD or FRESH FISH, lbs.	SQUID, bbls.	COARSE and MIXED FISH, bbls.	FISH OIL, galls.	FISH as BAIT, bbls.				FISH as MANURE, bbls.
District No. 1.																				
1 Charlotte.....	7000	60	6200	25				140050			7955	10000	378		17390	7410	3380		817,850 50	1
2 St. John.....		860	500	8000				39950							2850	4650	1000		219,975 50	2
District No. 2.																				
3 Albert.....	9500	110	2500		500			10				20000			40				4,867 00	3
4 Westmorland.....	25700	1340	1130000	750	6500			375			4500	13000	1000		100	53000	71000		768,645 00	4
5 Kent.....	8100	130	1963000	3840	20600			1150			16450	180000	20		1950	10000	35500	16	526,310 00	5
6 Northumberland.....	37100	2200	3270000	2200	65400			770			6000	1370000			500	4720	8700	20	184,410 00	6
7 Gloucester.....	26000	50	1115000	500	19500			470			16000	194000	785		1200	24400	59000	88	1,189,756 00	7
8 Restigouche.....	9500		268000		1500			35			20	31000			80	370	450		83,502 00	8
District No. 3.																				
9 Victoria.....	20700														100				4,980 00	9
10 Carleton.....	10000	25						10							50				4,150 00	10
11 York.....	33000	150		100	35000			10							100				16,038 00	11
12 Simsbury.....	2000	65		1200	36000			20							18				7,906 00	12
13 Queen's.....	5000	290		900	31000			10							52				13,317 00	13
14 King's.....	25000	*300		100	500	15000		20							100				15,093 00	14
Totals.....	218600	5580	7755200	18215	114800	117900	2980	180000	12470	45335	191000	1838500	2183	8120	49300	104550	179030	124		
Values.....	21860	61250	387760	71330	11440	8253	20800	300000	62350	83115	3730	55155	8732	16240	14790	156825	89335	186	4,186 800	

* There is over 100,000 lbs. of fresh shad, see p. 120. † Add nearly 3 million cans of sardines, \$147,575.

SESSIONAL PAPER No. 22

RECAPITULATION

OF the Yield and Value of the Fisheries of the whole Province of New Brunswick,
for the Year 1903.

Kinds of Fish.	Quantity.	Rate.	Value.	Total.
		\$ cts.	\$ cts.	\$ cts.
Salmon, fresh..... Lbs.	1,289,840	0 20	257,968 00	
" smoked..... "	5,800	0 20	1,160 00	
" canned..... "	4,900	0 15	735 00	259,863 00
Herring, salted..... Brls.	159,513	4 50	717,808 50	
" fresh or frozen..... Lbs.	3,983,000	0 01	39,830 00	
" smoked..... "	9,712,400	0 02	194,248 00	
" kippered..... Cans.	177,300	0 10	17,730 00	969,616 50
Mackerel, salted..... Brls.	440	15 00	6,600 00	
" fresh..... Lbs.	483,000	0 12	57,960 00	64,560 00
Lobsters, preserved..... Cans.	2,136,612	0 25	534,153 00	
" alive or fresh..... Cwt.	17,545		143,230 00	677,383 00
Cod, dried..... Cwt.	89,555	4 50	402,997 50	
" fresh..... Lbs.	504,500	0 04	20,180 00	
" tongues &c..... Brls.	250	10 00	2,500 00	425,677 50
Haddock, dried..... Cwt.	3,681	3 00	11,043 00	
" fresh..... Lbs.	1,459,000	0 03	43,770 00	
" (finnan haddies)..... "	140,900	0 06	8,454 00	63,267 00
Hake, dried..... Cwt.	18,690	2 25	42,052 50	
" sounds..... Lbs.	17,935	0 50	8,967 50	51,020 00
Pollock..... Cwt.	20,814	2 00		41,628 00
Halibut..... Lbs.	127,600	0 10		12,760 00
Trout..... "	218,600	0 10		21,860 00
Shad, fresh..... "	109,000	0 05	5,450 00	
" salted..... Brls.	5,580	10 00	55,800 00	61,250 00
Alewives, salted..... "	18,215		70,560 00	
" smoked..... Lbs.	38,500	0 02	770 00	71,330 00
Eels..... Brls.	2,980	10 00		29,800 00
Smelts..... Lbs.	7,755,200	0 05		387,760 00
Bass..... "	114,500	0 10		11,440 00
Whitefish..... "	9,700	0 15		1,455 00
Pickrel..... "	117,900	0 07		8,253 00
Sturgeon..... "	6,000	0 08	480 00	
" caviare..... "	475		428 00	908 00
Flounders..... "	191,000	0 03		5,730 00
Tom cod..... "	1,838,500	0 03		55,155 00
Sardines..... Brls.	180,000	2 00	360,000 00	
" canned..... Cans.	2,951,500	0 05	147,575 00	507,575 00
Squid..... Brls.	2,183	4 00		8,732 00
Oysters..... "	12,470	5 00		62,350 00
Clams..... "	45,535		83,115 00	
" canned..... Cans.	212,900	0 10	21,290 00	104,405 00
Scollops..... "				2,430 00
Coarse and mixed fish..... Brls.	8,120			16,240 00
Fish as bait..... "	104,550	1 50		156,825 00
" manure..... "	179,030	0 50		89,515 00
" oil..... Galls.	49,300	0 30		14,790 00
Seals..... No.	134	1 25		186 00
Dulse..... Lbs.	50,000			3,036 00
Total for 1903.....				4,186,800 00
" 1902.....				3,912,514 20
Increase.....				274,285 80

RECAPITULATION

OF the material used in the Fishing Industry of the whole of New Brunswick,
for the Year 1903.

Articles.	Value.	Total.
	\$	\$
352 Fishing vessels (4,837 tons).....	153,975	
7,388 " boats.....	216,333	370,308
924,844 Fathoms of gill nets	412,156	
15,765 " seines.....	34,107	
2,201 Smelt nets.....	113,560	
117 Bass nets.....	920	
2 Trap nets.....	2,000	
457 Weirs.....	217,526	
50 Eel traps.....	50	
1,186 Trawls.....	8,558	
8,813 Hand lines.....	9,434	798,311
199 Lobster canneries	116,300	
240,449 " traps	219,537	335,837
197 Freezers and ice houses.....	66,600	
1,359 Fish and smoke houses.....	204,610	
819 Smelt shanties	12,470	
349 Fishing piers and wharfs.....	101,880	
112 Fishing tugs and smacks.....	39,775	
5 Sardine canneries.	41,000	
16 Clam canneries.....	600	
7 Fish curing establishments	10,000	
25 Fish presses.....	3,000	
1 Fish guano factory.....	5,000	
154 Weir scow's.....	8,000	
90 Pile divers.....	8,000	500,935
Total		2,005,391

Statement of the number of men engaged in the Fishing Industry of New Brunswick.

Number of men in vessels.....	1,200
" " boats.....	11,242
" persons in lobster canneries.....	4,891
Total.....	17,333

SESSIONAL PAPER No. 22

APPENDIX No. 5

PRINCE EDWARD ISLAND.

REPORT BY INSPECTOR J. A. MATHESON.

CHARLOTTETOWN, P. E. ISLAND, January 2, 1904.

To the Dominion Commissioner of Fisheries,
Ottawa.

SIR,—I have the honour to submit my annual report of the Fisheries of the province of Prince Edward Island, together with the tabulated returns showing the value and catch of fish for the season of 1903 and synopses of the officers' reports.

The following shows the aggregate values for the last three years:—

1901	\$1,050,648
1902	887,024
1903	1,099,510

Mackerel.

I am pleased to report a large increase over last season's catch. Netting commenced about July 10, with good results and fishermen had fair hooking during the latter part of that month.

The August fish were large and in good quality and good prices were obtained.

Oysters.

I have to report a decrease in the quantity of oysters taken and would again call your attention to the recommendation contained in last year's report in reference to increasing the size limit.

Owing to the high prices obtained, fishermen and shippers are well satisfied with the season's results.

Lobsters.

The ice having left our coast, fishing commenced in April and the catch for the season showed a great improvement in quality and quantity, the pack being larger by three hundred thousand pounds.

This is a convincing proof of the wisdom of protecting this branch of the fisheries and an encouragement towards the continuance of the protection. The fishermen are of opinion that the lobster hatchery at Pictou has helped to keep up the supply of fish and are looking forward to a further increase when the hatchery at Block House Point is in operation.

Herring.

This fish struck in the last week of April and an abundance was taken to be used for lobsters and mackerel bait, for which purpose, principally, the herring are fished.

Cod.

I have to report a large shortage in cod chifley due to the apathy of the fishermen and to the increase of dogfish which infest our coast and cause a great deal of annoyance and loss to those engaged in this branch of the industry. I would suggest that a bounty be offered to the fishermen as an inducement to exterminate, by determined and extensive fishing, these pests of the sea.

Hake.

This fishing also suffered largely from the same cause as the codfishing.

Smelts.

I am pleased to report a large increase in the catch. Prices were good and fishermen reaped the richest harvest that they have had for the last few years. Gill nets were more largely used and a better quality of fish was taken.

Trout.

These fish are of little commercial value to this province but there were sufficient with us to make it interesting for sportsmen.

Overseer J. Davison, of Prince County, reports a decrease in the catch of herring. Mackerel were more plentiful but were taken principally with nets. Lobsters increased in size and were of better quality. The cod and hake fishing was much below last season's catch owing, chiefly, to the quantity of dogfish and the unusually rough weather. Smelts were more plentiful and of good quality. There was a shortage in oysters.

Overseer McCormack, of King's County, reports that herring struck in about April 30, in small quantities. Between the 1st and 15th May fair catches were made and fishermen secured enough for bait; good catches of fall herring were made which found ready sale at remunerative prices.

The cod fishing commenced about May 1. The fish were very large and fishermen looked forward to a good season's catch but about July 1, dogfish made their appearance on the coast in large numbers and practically put an end to the fishing. The shortage in hake was due to the same cause.

Mackerel, you will be pleased to learn, show a large increase. Some few barrels were taken in the spring with nets; hooking commenced the last week in July and continued through August and September north and south of East Point. Very few were taken at Souris or Georgetown with hooks by the fishermen in boats.

Lobsters show an increase over last year of 144,000 pounds.

There were about three thousand additional traps in use.

Fishermen and packers are well pleased with the results of the season's work.

I have the honour to be, sir,

Your obedient servant,

J. A. MATHESON,
Inspector of Fisheries.

PRINCE EDWARD ISLAND.

RETURN showing the Number, Tonnage and Value of Vessels and Boats, and the Quantity and Value of all Fishing Materials, &c,
County of King's, Province of Prince Edward Island, for the Year 1903.

Number.	FISHING VESSELS AND BOATS.						FISHING GEAR OR MATERIALS.									
	Vessels.			Boats.			Gill Nets.			Perch Nets.			Trawls.			
	Number.	Tonnage.	Value.	Men.	Number.	Value.	Men.	Number.	Fathoms.	Value.	Number.	Value.	Number.	Value.		
DISTRICTS.																
King's County.																
1	Souris and Red Point	3	60	1100	11	50	60	200	4000	1500	50	100	50	500	4	2000
2	Bay Fortune					20	60	80	1600	640			5	50	3	1700
3	Annandale	1	10	200	4	100	200	350	6500	1800	20	40	6	60	6	4000
4	Georgetown	8	220	4000	40	120	260	500	10000	3500	50	100	30	300	9	4000
5	Murray Harbour North					75	140	350	6500	1800			10	100	12	3000
6	" South	10	220	4400	60	50	100	200	4000	1600	50	100	60	600	5	6100
7	Morell and St. Peters.	4	65	1000	14	80	100	250	4000	2000	20	40	20	200	6	4000
8	Naufrage					50	80	120	2000	600					7	4700
9	North Lake					45	90	150	3000	800					8	3000
10	East Lake					40	75	100	200	600			15	150	9	2100
	Totals	26	575		129	630	1165	2300	41800		190		196		53	
	Values			10500			13100		14910			380		1960		32900

RETURN showing the Number and Value of Vessels, Quantities of Fish and Fish Products, &c.—Prince Edward Island—Continued.

Number.	DISTRICTS.										KINDS OF FISH.										Number.					
	King's County.										Salmon, fresh, lbs.	Herring, salted, bbl	Herring, fresh, lbs.	Herring, smoked, lbs.	Mackerel, fresh, lbs.	Mackerel, salted, lbs.	LoBSTERS, preserved in cans, lbs.	Cod, dried, cwt.	Cod, tongues and sounds, bbls.	Haddock, fresh, lbs.		Haddock, dried, cwt.	Hake, dried, cwt.	Hake, sounds, lbs.	Halibut, lbs.	Trout, lbs.
1	Souris and Red Point										150	30000		1200	150	63888	1500	10	1000	50	500	1000	150	1000	1	
2	Bay Fortune	600									50	22000		200	10	44448	50		200		40	80			1500	2
3	Annandale										150	30000		300	25	130464	150		1500	75	100	200	50	500	3	
4	Georgetown	200									200	40000		2000	50	113952	500	20	2000	100	150	300	400	1000	4	
5	Murray Harbour North										100	70000	140000	1000	25	170112	200		500	50	50	100		1000	5	
6	" " South										186			500	50	81024	1000		1000	200	985	1970	200	500	6	
7	Morell and St. Peters	2700									150			1000	250	137424	800	25	1500	50	100	200	400	4000	7	
8	Naufrage										50			500	100	50472	150						300	1000	8	
9	North Lake										50			1000	250	73440	200						200	1000	9	
10	East Lake										200			1000	700	28800	300	10				500	1000		500	10
Totals											3500	1286	552000	140000	8700	1610	903024	4850	65	7700	575	2425	4850	1700	12000	
Values											700	5787	5520	2800	1044	24150	225756	21825	650	231	1725	5456	2425	170	1200	

Return showing the Kinds and Quantities of Fish and Fish Products in the County of Queen's, Province of Prince Edward Island, for the Year 1903.

Number.	Fishing Districts.	Kinds of Fish.												Fish Products.					Total Value of All Fish.	Number.				
		Herring, salted, brls.	Herring, fresh, brls.	Mackerel, fresh, lbs.	Mackerel, salted, brls.	Lobsters, preserved in cans, lbs.	Lobsters, fresh in shell, cwt.	Cod, dried, cwt.	Cod, tongues and sounds, brls.	Haddock, fresh, lbs.	Haddock, dried, cwt.	Trout, lbs.	Smelts, lbs.	Alwives or Gas- pereau, brls.	Eels, brls.	Oysters, brls.	Flounders, lbs.	Coarse and mixed fish, brls.			Fish oil, galls.	Fish as bait, brls.	Fish as manure, brls.	(Jams, brls.
Queen's County.																								
1	Tracadie.....	600	20000	20000	300	117312	100	1575	35	90000	50	1000	90000	500	160	3025	2000	25	800	1500	500	20	76,370 50	1
2	New London.....	400	.....	8000	645	54240	.....	650	10	20000	150	1200	8000	80	50	100	.....	10	100	900	80	.....	33,350 00	2
3	Point Prim.....	127	.....	.....	.....	102432	.....	70	.....	.....	.....	500	10000	.....	100	550	.....	50	.....	1600	400	.....	33,394 50	3
4	Rustico.....	4000	.....	5000	500	92064	75	4000	150	.....	.....	1000	20000	.....	250	.....	.....	50	200	650	200	20	74,056 00	4
5	Wheatley River.....	.....	.....	.....	.....	.....	.....	1000	10	.....	.....	700	10000	.....	.....	150	.....	.....	.....	.....	.....	.....	5,170 00	5
6	Pownal.....	.....	.....	.....	.....	24000	.....	.....	.....	.....	.....	.....	5000	.....	.....	.....	.....	.....	.....	500	400	.....	7,950 00	6
7	Charlottetown.....	.....	10000	.....	.....	.....	85	.....	.....	.....	.....	.....	25000	.....	.....	.....	.....	.....	.....	600	300	.....	1,945 00	7
8	Crapaud.....	.....	.....	.....	.....	42480	.....	.....	.....	.....	.....	.....	30000	.....	25	.....	.....	.....	.....	800	400	10	13,420 00	8
9	Lot 65.....	4000	.....	.....	.....	125424	25	.....	.....	.....	.....	1000	60000	.....	15	1150	.....	.....	.....	.....	.....	.....	59,931 00	9
10	Bays and Rivers.....	10000	.....	.....	.....	.....	.....	.....	.....	.....	.....	5000	40000	200	150	.....	.....	.....	.....	.....	.....	.....	49,840 00	10
Totals.....		19127	30000	33000	1445	557952	285	7295	265	110000	200	10400	298000	780	750	4975	2000	85	1100	6550	2280	50	.....	.....
Values.....\$		86071	300	3960	21675	139488	1995	32828	2050	3300	600	1040	14900	3120	7500	24875	60	170	330	9825	1140	200	.....	355,427 00

4-5 EDWARD VII., A. 1905

RETURN showing the Number, Tonnage and Value of Vessels and Boats and the Province of Prince Edward

Number.	DISTRICTS.	FISHING VESSELS AND BOATS.						FISHING GEAR								
		Vessels.			Boats.			Gill Nets.		Seines.		Trap Nets.				
		Number.	Tonnage.	Value.	Men.	Number.	Value.	Men.	Number.	Fathoms.	Value.	Number.	Fathoms.	Value.	Number.	Value.
<i>Prince County.</i>																
1	Tignish.....			\$		48	2800	128	30	600	300				1	1000
2	Alberton	5	120	2100	33	21	825	60	230	4600	1990	2	300	200		
3	Lot 11					24	755	31	46	830	176					
4	Narrows.....					25	1000	50	150	3000	500					
5	Grand Rivers.....					25	400	40	14	280	140					
6	Richmond Bay.....	1	10	350	4	70	1300	120	150	2250	600					
7	Summerside					20	400	20	5	100	50					
8	Travellers Rest					90	1300	160	25	500	125					
9	Carleton.....					24	1370	48	45	900	360					
10	Tryon.....					36	3270	72	78	2865	780					
11	Malpeque	2	32	700	8	100	3700	240	20	400	100					
12	Egmont Bay.....					100	3820	210	246	4229	950					
13	Brae and West Point.....					11	330	25	30	600	135					
14	Miminigash	1	12	300	4	38	1500	75	160	3525	963					
15	Nail Pond.....					41	1880	79	40	910	470	2	400	900		
16	Skidders Pond.....					43	840	51	60	1400	367					
17	Brae and Higgins wharf..					6	400	12	7	140	28					
18	Bideford and Frost River..					8	170	13								
19	Rivers Lot 5 and 6.....					18	164	30	8	160	36					
20	Wellington.....					15	140	15	2	40	20					
	Totals	9	174	....	49	763	...	1479	1346	27329	....	4	700	....	1	....
	Values.....\$			3450	....		26364	....			8090	....		1100	....	1000

SESSIONAL PAPER No. 22

Quantity and Value of all Fishing Materials, &c., in the County of Prince, Island, for the Year 1903.

OR MATERIALS.						LOBSTER PLANT.					OTHER FIXTURES USED IN FISHERIES.						
Trawls.		Smelt Nets.		Hand Lines.		Canneries.		Traps.		Persons employed in canneries.	Freezers and Ice Houses.		Smoke and Fish Houses.		Piers and Wharfs.		
Number.	Value.	Number.	Value.	Number.	Value.	Number.	Value.	Number.	Value.		Number.	Value.	Number.	Value.	Number.	Value.	Number.
	\$		\$		\$		\$		\$			\$		\$		\$	
2	20	3	45	75	50	6	5000	8400	4200	135	1	200					1
	...	25	500	200	100	8	3275	5575	3225	49	1	1000					2
	...	13	425		...	4	1400	4400	1950	22							3
1	20	8	300	125	55	5	700	5000	4000	100					1	1000	4
	...	2	70		...	3	160	850	690	14							5
	...			10	4												6
	...	10	200					100	50				1	25			7
	...	8	160	10	10												8
	...	6	120		...	6	3250	5450	2250	26							9
	...	7	92		...	9	4500	9850	8400	92							10
	...	13	325	45	25	3	2000	2000	2000	12					1	10000	11
	...				...	22	6400	25015	17045	185							12
	...	2	40	20	9	3	900	2080	700	35			3	125	1	14000	13
34	444	3	45	84	42	5	1656	5820	3045	54	1	700					14
	...			50	25	5	4300	7400	7500	110	1	1500	12	3000			15
9	125			20	10	4	4900	7300	5200	82	1	40					16
	...	12	360		...	1	300	1500	800	12					2	2000	17
	...				...	1	50	1400	975	8					1	1000	18
	...	1	30	12	12										1	500	19
	...	2	35	8	4	1	50	1600	500	8							20
46	...	115	...	659	...	86	..	93740	...	944	5	...	16	...	7	...	
...	609	...	2747	...	346	...	36841	...	62530	...	...	3440	...	3150	...	28500	

RETURN showing the Kinds and Quantities of Fish and Fish Products in the

Number.	DISTRICTS.	KINDS OF FISH								
		Herring, salted, brls.	Herring, fresh, lbs.	Mackerel, fresh, lbs.	Mackerel, salted, brls.	Lobsters, preserved in cans, lbs.	Lobsters, fresh in shell, cwt.	Cod, dried, cwt.	Haddock, fresh, lbs.	Haddock, dried, cwt.
	<i>Prince County.</i>									
1	Tignish	500	2000		300	88260		500		100
2	Alberton	400	5000		600	50880		400		200
3	Lot 11	150		1200		28064		52		
4	Narrows	100			40	39000		650		
5	Grand River	350				6432		40		
6	Richmond Bay	400	2000		70		25	100		
7	Summerside	40	1000				90			
8	Travellers Rest	30	4000					40		
9	Carleton		2000			36576				
10	Tryon	200				108844				
11	Malpeque	100	5000		100	14180		800		
12	Egmont Bay	500				250391				
13	Brae and West Point	140				10160				
14	Miminigash	583			256	53328		1184		560
15	Nail Pond	560		200	140	42957		1030	2600	100
16	Skinnners Pond	200			65	96332		700		200
17	Brae and Higgins wharf					31920				
18	Bedeque and Trout River	30				4800				
19	Rivers of Lot 5 and 6	84	1000					80		
20	Wellington	40				12000		20		
	Totals	4347	22000	1400	1571	874424	115	5596	2600	100
	Values	19561	220	168	23565	218606	805	25182	78	300

SESSIONAL PAPER No. 22

County of Prince, Province of Prince Edward Island, for the Year 1903.

AND FISH PRODUCTS.

Hake, sounds, lbs.	Halibut, lbs.	Trout, lbs.	Smelts, lbs.	Alewives or Gaspareau, brls.	Eels, brls.	Oysters, brls.	Squid, brls.	Fish oil, galls.	Fish as bait, brls.	Fish as manure, brls.	Clams in shell, brls.	TOTAL VALUE OF ALL FISH.	Number.
												\$ cts.	
500			5000					500	1875			35,297 50	1
200			78380					100	1600			32,269 00	2
			36900					10	1000			11,417 00	3
	250		100000		15	1800		100	1900		1000	32,780 00	4
			4000			950			150			8,538 00	5
			35000		4	2800		30	300			19,744 00	6
			30000		10	250			50			3,745 00	7
			36000		18	3150		25				18,092 50	8
			18000		10	200			900			12,514 00	9
			15900						1533			31,205 50	10
			20000			2250		200	400			22,130 00	11
									5180			73,067 75	12
									580			4,040 00	13
1159		840	9560		7		11	857	1000			29,396 10	14
250								360	2000	200		23,384 25	15
70								150	850			30,913 00	16
			22000	14	5	298			400		700	12,676 00	17
			3000		60	910			100			6,785 00	18
			2000		8	340		5				2,629 50	19
			4000		25	400		20				6,726 00	20
2179	250	840	419740	14	162	13348	11	2356	20118	200	1700		
1089	25	84	20987	56	1620	66740	44	707	30477	100	3400	416,350 10	

SESSIONAL PAPER No. 22

RETURN showing the Kinds and Quantities of Fish and Fish Products in the Province of Prince Edward Island, for the Year 1903.

Number.	County.	KINDS OF FISH.																Number.
		Salmon, fresh, lbs.	Herring, salted, brls.	Herring, fresh, lbs.	Herring, smoked, lbs.	Mackerel, fresh, lbs.	Mackerel, salted, brls.	Lobsters, preserved in cans, lbs.	Lobsters, fresh, in shell, cwt.	Cod, dried, cwt.	Cod, tongues and sounds, brls.	Haddock, fresh, lbs.	Haddock, dried, cwt.	Hake, dried, cwt.	Hake, sounds, lbs.	Halibut, lbs.	Trout, lbs.	
1	King's	3500	1286	552000	140000	8700	1610	903024	.....	4850	65	7700	575	2425	4850	1700	12000	1
2	Queen's	.....	19127	30000	.....	33000	1445	557952	285	7295	205	110000	200	.....	.....	.....	10400	2
3	Prince	.....	4347	22000	.....	1400	1571	874424	115	5596	.....	2600	100	1260	2179	250	840	3
	Totals	3500	24760	614000	140000	43100	4626	2235400	400	17741	270	120300	875	3685	7029	1950	23240	

Number.	COUNTY.	KINDS OF FISH.										FISH PRODUCTS.				Total value of all Fish.	Number.
		Smelts, lbs.	Alwives or Gas- pereau, brls.	Eels, brls.	Caplin, brls.	Oysters, brls.	Flounders, lbs.	Tom Cod or Frost Fish, lbs.	Squid, brls.	Coarse and mixed fish, brls.	Fish oil, galls.	Fish as bait, brls.	Fish as manure, brls.	Clams, brls.	Clams, preserved in cans.		
1	King's	23000	185	250	315	10		550	185	835	3755	11050	100	75	425	327,733	25
2	Queen's	298000	780	750		4975	2000			85	1100	6550	2280	50		355,427	00
3	Prince	419740	14	162		13348			11		2357	20118	200	1700		416,350	10
	Totals	740740	979	1162	315	18333	2000	550	196	920	7212	37718	2580	1825	425	1,099,510	35

RECAPITULATION

SHOWING Yield and Value of the different Fisheries of the Province of Prince Edward Island during the Year 1903.

Kinds of Fish.	Quantity.	Price.	Value.
		\$ cts.	\$ cts.
Salmon, fresh.....Lbs.	3,500	0 20	700 00
Herring, salted.....Brls.	24,760	4 50	111,420 00
" fresh.....Lbs.	604,000	0 01	6,040 00
" smoked....."	140,000	0 02	2,800 00
Mackerel, fresh....."	43,100	0 12	5,172 00
" salted.....Brls.	4,626	15 00	69,390 00
Lobsters, preserved in cans.....Lbs.	2,335,400	0 25	583,850 00
" fresh in shell.....Cwt.	400	7 00	2,800 00
Cod, dried....."	17,741	4 50	79,834 50
" tongues and sounds.....Brls.	270	10 00	2,700 00
Haddock, fresh.....Lbs.	120,300	0 03	3,609 00
" dried.....Cwt.	875	3 00	2,625 00
Hake, dried....."	3,685	2 25	8,291 25
" sounds.....Lbs.	7,029	0 50	3,514 50
Halibut....."	1,950	0 10	195 00
Trout....."	23,240	0 10	2,324 00
Smelts....."	740,740	0 05	37,037 00
Alewives.....Brls.	979	4 00	3,916 00
Eels....."	1,162	10 00	11,620 00
Caplin....."	315	3 50	1,102 50
Oysters....."	18,333	5 00	91,665 00
Flounders.....Lbs.	2,000	0 03	60 00
Tom cod or frost fish....."	5,500	3 00	165 00
Squid.....Brls.	196	4 00	784 00
Coarse and mixed fish....."	920	2 00	1,840 00
Fish oil.....Galls.	7,212	0 30	2,163 60
Fish as bait.....Brls.	37,718	1 50	56,577 00
Fish as manure....."	2,580	0 50	1,290 00
Clams, salted....."	125	4 00	500 00
" in shell....."	1,700	2 00	3,400 00
" in cases.....Case.	425	5 00	2,125 00
Total.....			1,099,510 35

RECAPITULATION

SHOWING the number and Values of Vessels, Boats, Nets, Lobster Canneries, Traps, &c., used in the fisheries of the Province of Prince Edward Island and number of fishermen employed, season 1903.

Articles.	Value.	Total.
	\$	\$
41 fishing vessels (839 tons)	17,350	
2,013 " boats	53,424	
4,231 gill nets (81,154 fathoms)	26,885	
11 seines (2,225 fathoms)	1,750	
231 trap nets	2,980	
362 trawls	3,269	
385 dip nets	335	
208 smelt nets	4,297	
3,217 hand lines	2,271	
		112,561
190 lobster canneries	143,291	
253,195 " traps	160,030	
		303,321
7 freezers and ice houses	6,640	
179 smoke and fish houses	6,910	
52 piers and wharfs	31,160	
17 steamers and smacks	4,200	
		48,910
Total		464,792

Number of persons employed in the fisheries of Prince Edward Island :—

Men in fishing vessels	202
" " boats	3,754
Persons in lobster canneries	2,612
Total	6,568

APPENDIX No. 6.

PROVINCE OF QUEBEC.

REPORT ON THE GULF OF ST. LAWRENCE DISTRICT, INSPECTOR W
WAKEHAM, M.D., GASPÉ BASIN.

SOUTH SHORE DISTRICT, INSPECTOR N. LAVOIE, M.D., L'ISLET.

INLAND DISTRICT, INSPECTOR A. H. BELLIVEAU, OTTAWA.

GASPÉ, March 10, 1904.

To the Dominion Commissioner of Fisheries,
Ottawa.

SIR,—I have the honour to submit the statistical report of the fisheries of the Gulf division for the season of 1903. In my advance report, for the season, to be published with your report for 1902, I had foretold a decrease as compared with 1902, and the complete returns show that there was a decrease in the two principal fisheries—cod and herring—but the material increase in the salmon, and lobster fisheries, together with the fact that we have advanced the price allowed for cod from \$4 per cwt. to \$4.50, and for canned lobsters from 20 to 25 cents per pound can, gives us for 1903 a total value of \$1,994,806.90, being an increase over 1902 of \$175,896.

The season of 1903 was an unusually rough one, strong easterly winds prevailed all spring, and up to the month of August. At all exposed points this condition very much handicapped both the salmon net fishermen, and those who fished for cod in boats. This was particularly the case on the coast of Gaspé.

That most abominable pest the dogfish, which we have had with us, for the past five seasons was also a cause of great worry and annoyance, and of considerable loss, especially to those fishing for cod and herring. I do not for an instant wish to say that the presence of these dogfish is not a cause of loss to our fishermen—they destroy a great amount of gear—tearing up the herring, and mackerel nets, and cutting off the snoods on both trawls, and hand lines—they prey on, harass, and worry all kinds of fish—they must consume an enormous amount of bait, and by tearing the bait off the hooks they cause fishermen to lose a great deal of time, and use a much larger quantity of bait; but I must say speaking for the Gulf division that they have not caused us any such serious loss as they seem to have in other places judging by the outcry against them. Our statistical returns show this very clearly.

They have always existed, and have always been a cause of annoyance, and loss to the fish in the warmer waters to the south of us on both sides of the Atlantic, and their present northern movement is not confined to our coasts—for I see that the fishermen of the Orkney islands, who have not usually been bothered by them are making the same complaints as we are about them. They have not yet extended to the Labrador though on the Little North Shore, west of Moisie, they were quite numerous, and it is on this part of the coast that a company has been licensed to capture them, for the manufacture of oil, and fish guano with the view of encouraging their capture, and utilization, your department has accorded a bounty to this company, we will therefor soon know whether it is practicable to capture them in sufficiently large numbers to

SESSIONAL PAPER No. 22

make the venture profitable. I do not think that this can be done without the payment of a considerable bounty.

They have never been regular inhabitants of our Gulf waters and I am inclined to think that they will, some of these days, disappear as suddenly as they came. Their appearance here is most probably due to a lack of food further south. They were this season most abundant, and troublesome about the Magdalen islands, and in the Baie Chaleur, we would naturally expect to find them at these points, where the water is shoaler and warmer than in other parts of the gulf. The returns from the Magdalen islands show that the fishing was quite an average one, while the two fishing stations showing the best returns for the main land, on the south shore, are Newport and Grand river. The boats from these stations fish off Miscou in the Baie Chaleur, the fishermen complained bitterly of the annoyance, and loss caused by these dogfish, but all the same, they made unusually good hauls of fish.

Could any means be discovered of capturing these pests in large numbers, a profitable industry could no doubt be developed, by expressing their oil, and preparing their flesh, &c., as a fish guano—especially if the industry were backed by a substantial government subsidy. So far, however, no wholesale method for their capture has been discovered, and I do not see how the thing can be done.

It has been reported that they can be used as a food, and substituted for some of the lower members of the cod family, and some imaginative people with extra strong stomachs, speak of them highly as an article of diet. They are no doubt like all the sharks, scavengers to some extent, in this respect they are, however, no worse than trout, eels or lobsters, but it would I fear, be useless to put them on our fish markets as an article of food—there is a prejudice among the white people against eating *Shark* which it would take some time, and a good deal of educating to overcome.

I note also that their meat has been put up in tins, and sold as canned *Japanese Mackerel*; this is an age of shams and adulterations, particularly as regards food products, and a little more or less may not make much difference, but I suppose one could hardly venture officially to recommend any such artifice. So that I do not expect for some time to see them come into use as an article of food, though they are relished by the southern blacks, and are used to some extent in England, we must for the present be content if we can manage to discover some method for their wholesale capture, and utilization as a fertilizer. Years ago, when fish oil had a greater value, it paid to take them for the oil alone, but this is no longer the case. A great many plans for their capture in large quantities, have been suggested by ingenious people, not all of whom have ever seen them, or known anything of sea fishing, so far I have not seen any plan suggested which seemed to me to be at all feasible.

As I have said a company has been organized in the county of Saguenay with the object of taking these dogfish, and other sharks, expressing the oil and preparing a fertilizer from the residuum. I sincerely hope the venture may be successful.

Bait was never abundant all season, the easterly winds which prevailed, undoubtedly kept the herring and squid off shore, when bait was obtained fish were taken abundantly.

It is proposed for next season, to establish on our Labrador a number of whaling stations, the whales are to be taken by means of small, fast steamers armed with bomb-guns and lances. This method of capturing whales has been successfully carried on for some years in the Archangel sea, and more recently in Newfoundland waters. At first merely the blubber was saved for the manufacture of oil—the carcass and refuse being allowed to go adrift—this was ruinous to the fisheries in the neighbourhood, now, however, by a new process known as the Rissmullen Process, the whole of the carcass is utilized for the manufacture of a valuable fertilizer. As whale are abundant along the whole of our north coast, from Belisle to Saguenay, I expect to see a number of these whaling stations established there, giving employment to considerable capital and many men.

COD.

This fishery began early in May, the returns showed a decreased catch, as compared with previous season. This was due altogether to the bad weather of the spring

and early summer, which kept the supply of fresh bait offshore. No doubt also the presence of the dogfish helped in many places to reduce the catch. On the Lower Labrador where the fishery is carried on inshore in shelter, the catch was good.

I note in recent numbers of *Forest and Stream* (Nov. 28, 1903), a statement which is quite misleading and should be contradicted. 'That the Gulf fisheries are threatened, that some of the fishermen of the Gulf of St. Lawrence are now in a state of alarm and not without good reason, because of the continual diminution of the catch of codfish in their waters. The two principal causes which are believed to have contributed to this result, are the destructive trap nets and steam trawling for cod and herring, &c., &c.'

The statement is wholly and entirely false, cod are as abundant in the Gulf as they ever were. Trap nets are only used for cod on the Labrador, and that for a season of not more than six weeks during the time of the inshore caplin run—while a steam trawler was never seen in the Gulf. Spring herring are used for manure in the Baie Chaleurs. During the year of the reciprocity treaty an immense trade was done with the United States in this lean herring—the fish were roughly salted, being only gibbed, not split—in this way they brought about \$2 a barrel. They were shipped by schooner load to Boston, from there being sent to the Southern States and the West Indies, where they were used by negroes. When the reciprocity treaty was abolished and a duty put on this herring, the trade was instantly killed, as they were only worth at most \$2.50 per barrel and could not stand the duty. For several years the people of the Bay suffered severely from the loss of that trade. They then gradually began to cultivate potatoes, for which they used as manure the same herring that they formerly exported to the United States. They simply changed their market, and they have greatly benefited by the change. Spring herring are to day as abundant at the Magdalen islands, in the Bay Chaleurs, at Anticosti and on the north coast, at all points where we found the fish spawning grounds, as they ever were.

When I first saw herring being used in the county of Bonaventure in large quantities for manure, I was shocked, and almost considered the practice immoral, but on close inquiry on the spot, and studying the history of the fishery, I changed my views. There has been no decrease in the volume of spring herring coming into the gulf, and by using these fish for manure they, the fishermen, have become farmers and have found a local market for the same quantity of fish that they formerly exported foreign, and they have greatly benefited by the change, so that the imposition of this duty by the United States which was intended to be a *curse* has turned out a *blessing*. I do not know where the correspondent of *Forest and Stream* got his information, but the whole article is ridiculous from start to finish, and it is a pity that such random assertions should go abroad. The idea of a petition to the government to 'prohibit steam trawling for cod and herring in the gulf' when no one there ever saw a steam trawler is, to say the least, rather rich.

SALMON.

The returns from the salmon fishery show an increase of about 40,000 pounds. This was altogether due to the increased catch in the estuaries of the large rivers on the north shore. In Gaspé and Bonaventure there was a considerable falling off in the catch, while the sea coast nets on the north shore also did badly. This was clearly and solely due to the rough weather in May, June and July. The fly fishing was generally good.

MACKEREL.

This fishery, which is confined to the Magdalen Islands, shows a slight falling off, which must also be attributed to the unfavourable weather conditions. The prices obtained were high owing to the scarcity of mackerel elsewhere. A few small schools were seen in the neighbourhood of Point des Monts.

LOBSTERS.

The returns from the canners show an increased pack of nearly 300,000 pounds. This increase occurred entirely at the Magda'en islands or on the mainland. Both on the south and north coasts the pack was about the same. This increase has occurred in spite of the fact that we had fewer canneries in operation, with a great reduction in the number of traps fished. It was everywhere noticed that there was a marked increase in the average size of the lobsters taken.

HERRING.

The catch of spring herring at the Magdalen Islands, Baie Chaleur, Anticosti, and along the north shore was about as usual. No diminution has ever been noticed by our fishermen in the spawning grounds of the gulf. It would be impossible to make any one, not on the spot, and seeing for himself, appreciate the enormous volume of herring that enters the gulf in the spring. Gill nets set out for an hour are often sunk with the weight of herring in them. Seines are landed to the strand with many thousands of barrels at a single haul. The pots of trap nets are filled solid with a shining mass. Over miles, and miles of coast the water is made milk white with the milt of the male fish—while after an on shore-breeze great walls of spawn are rolled ashore through which paths have to be shovelled to reach the water—predacious birds and fishes hover about, and prey on the schools. So far I do not believe that any serious inroad has been made on this enormous volume of herring by all that man has taken. After spawning there great schools back off, and go out to sea. During the summer herring are frequently scarce in shore, and the codfishery suffers for want of bait, while late in the fall fat herring are generally taken close in shore just as the ice is making. Herring were scarce this past summer in shore, this was most likely due to the rough weather, large banking boats which remain out for three or four days, and set their nets for bait for off shore, where they fish, generally managed to secure herring for their trawls.

SMELTS.

There was a slight increase in the smelt fishery over the previous season, and fishermen did well as the prices obtained for them, on the New York market last fall were unusually high.

I beg to append synopses of the reports made to me by some of the local fishery officers.

Geo. Forrest, of Bonaventure, reports that the salmon fishery shows a considerable falling off—this was due to bad weather during the net fishing season. The codfishery was also poor due to want of bait during the summer, and to rough weather in the fall. In some places both spring and fall herring were scarcer than usual. There is also a decrease in the quantity of lobsters packed, owing to the fact that there was one cannery less in operation.

F. X. Chapados, of Gascons, reports that the codfishery was below the average, this was due in part to a scarcity of bait, and partly to the ravages of the dogfish which were abundant between August 15, and the end of September. Fall herring were also scarce in this part of the coast. The returns from the salmon and lobster fishery show an average catch. The regulations were well observed.

W. Langlois, of Gaspé, reports a slight decrease in the net fishery for salmon, as compared with the previous year. The returns for the herring fishery show an improvement over 1902. Codfishing began on May 15, but the catch was small throughout the summer as owing to constant east wind, and fog the boats were unable to venture to the off shore banks where fish, and bait were more abundant than close inshore. The smelt fishery shows an increase as compared with last season.

Louis Létourneau, of Mont Louis, reports a few mackerel as having been taken in the herring nets. Salmon net fishing in the eastern part of his division was poor, owing to constant east wind, and cold weather: in the western part of the division the salmon

catch was good. The first cod was taken on May 19, bait was scarce in the eastern part of the division, and the catch was poor, but in the west, when bait was more abundant, the fishing was fair. East winds, and strong currents greatly militated against the fishery. The partial failure in this fishery was altogether due to the bad weather.

Spring herring were very abundant. Summer herring struck in August, and were abundant, but they were small in size and would not make No. 1. Prices of all kinds of fish were high. Turbot were abundant off shore in 60 fathoms, but as it requires fine weather to carry on this fishery the returns were small.

Napoléon Comeau, of Godbout, reports one of the poorest fishing seasons within his recollection. There being a decrease in all the fisheries except that for halibut. Salmon were abundant, as was shown by the numbers that entered the rivers, and the catches of the fly fishermen, but owing to continuous east winds and gales the net fishery was a failure. In June for ten days in succession it was impossible to keep the nets out. Herring made their appearance early, and in great abundance, but the fall fishing was very poor. Cod also struck early and at first the catch was good, but during the later part of the season there was neither cod nor bait, so that many of the fishermen left off fishing, and engaged in other pursuits, finding employment at the different lumber mills in the vicinity.

Théotime Migneault, of Moisie, reports that salmon struck on the May 19, and were fished for up to July 29. The net fishery in the estuary of the Moisie river was most abundant, but the sea coast nets did badly. Many of them being wrecked during the easterly gale in June. On one occasion nets that were tied up on Saturday evening for the Sunday close time, were never let down again for eight days, it being impossible to get at them.

The cod fishing was good, the catch being better than usual.

Herring were scarce all season. There was an increase in the take of halibut. Bait was scarce at all time. No squid were taken. Mr. Migneault attributes this to continuous bad weather. The regulations were well observed.

John W. Scott, of Natashquan, reports that the seal hunt at the ice, made by two small schooners from Natashquan, each manned by 16 men, yielded a return of 500 seals. The salmon net fishing was very good, showing an increase of 29,000 lbs. over that of 1902, while the fly fishing in both the Watsheeshoo and Natashquan rivers was most excellent. Capelin struck the shore on June 18, but were scarce. Cod struck the coast on June 1, and were very abundant up to August 1, this fishery showing a considerable increase over that of last season. The herring and lobster fisheries both show a great falling off. The weather was very unfavourable for either taking or curing fish in June, July and August, during these three months the wind was steadily from the east with fog and rain.

M. J. A. Chevrier, of Amherst, Magdalen Islands, reports for the southern division of these islands that spring herring were more abundant than usual, but his fishermen had not done well as the prevailing highwinds had prevented the usual number of fishing vessels from coming to Amherst to buy bait. These vessels all went to the northern part of the islands where they found more shelter. The mackerel fishing was slightly below an average catch, owing in part certainly to the unfavourable weather, though it is the opinion of the local fishermen that the nets set off the entrance to the bay prevent these fish from coming in. The lobster fishery has exceeded the usual catch, and the fish taken were of an extra large size. All the people of the Magdalen islands would like to see the lobster season close early in July, to be opened again in September for two months fishing; they would also like to be allowed to fish inside the bays, and lagoons, as well as outside. The cod fishery was not as good as last year, but the higher prices obtained fully made up the difference.

Mr. Procule Chevrier, of House Harbour, Magdalen Islands, officer in charge of the Northern division of the Islands, reports an abundant catch of spring herring, most of which was sold by the local netters to foreign fishermen, who came seeking bait. Cod were abundant in May, and good catches were made, but during the summer the weather was so bad that very little was done. Late in the fall the fishery again improved. Spring mackerel struck on June 3, apparently in abundance, but the weather at once

SESSIONAL PAPER No. 22

became so bad that the catch was poor. Fall mackerel were not as abundant as in 1902, but the price was higher and the fishermen did well. The lobster pack was the best of recent years, and the run of lobsters much larger than for many years back. He had a few violations of the lobster close season regulations especially as regards fishing in the lagoons. The guilty parties were caught, and fined, and their gear confiscated.

The above being humbly submitted.

I have the honour to be, sir,
Your obedient servant,

W. WAKEHAM.

REPORT ON THE FISHERIES OF THE SOUTH SHORE OF THE RIVER ST. LAWRENCE, FROM LÉVIS TO CLAUDE RIVER, TOGETHER WITH REMARKS ON THE LOBSTER INDUSTRY OF THE COUNTIES OF BONAVENTURE AND GASPÉ, DURING THE SEASON OF 1903, BY INSPECTOR N. LAVOIE, M.D.

L'ISLET, January 15, 1904.

To the Dominion Commissioner of Fisheries,
Ottawa.

SIR,—I have the honour to submit herewith a report of this year's fishing in my division which extends from Lévis to Claude river, on the south shore of the St. Lawrence, together with fishery statistics and remarks on the lobster fishery of Bay des Chaleurs and Gaspé county.

Taken as a whole, the fishing season just concluded cannot be said to have been a success, although the yield was better in some places than in others. In the counties of Lévis and Bellechasse, for instance, better results were obtained than elsewhere, especially in eel fishing, which shows an increase of fully one hundred per cent over the year 1902, an exceptionally good one by the way. At other stations, such as Green Island, Cacouna, Sacré-Cœur, Bic, &c., no complaints were heard about fish being scarce, but for all that, the catch was much below that of last year. From Méchins to Marsouis, the yield of cod and herring may still be considered to have been remunerative for such men as carried on fishing with perseverance. Reference to the statistics annexed to this report, will show, however, that outside the above named localities, the catch was one of the poorest experienced for a great many years past. In this connection, it must be remarked that some thirty large brush fisheries were not set, the owners being thoroughly disgusted with previous ill-success, and as employment was in good demand and wages high, people seemed to prefer a sure thing than risking their time and money in fishing operations. This accounts, partly, for the catch being so poor between Berthier and Sandy Bay. Several reasons are given for this ill-success. In previous years, the blame was attributed to stormy weather, excessive heat, &c., but this season, with the exception of large schools of predaceous fishes which visited our waters, these causes did not exist, and everything seemed to indicate a big catch. The temperature was cool, the weather calm, but for all that, very few fish were caught. It seemed as if they had found a way to avoid nets and brush fisheries by keeping in the middle channels. From Sandy Bay to Marsouis, people had, in former years, had such great success in cod and herring fishing that the greater part of them went to the expense of procuring improved and costly fishing gear, neglecting their farms to spend days and weeks on the fishing grounds, with the hope of making a small fortune in a few days. But, this year, instead of the hundred of quintals of cod and barrels of herring which

4-5 EDWARD VII., A. 1905

they expected to secure, hardly 50 quintals of cod and 400 barrels of herring were taken at Sandy bay, River Blanche and Matane. Fortunately, the crops were abundant, employment in great demand, wages high, and these circumstances helped to save the situation.

The total value of fish caught from Marsouis to Capucins is about \$23,000 and from Capucins to St. Nicholas, \$56,500.

COD.

For the past three years, a great scarcity of cod has been felt at all the stations above Méchins. Indeed, the fishermen of Sandy Bay, River Blanche, Métis and Ste. Félicité, caught so little fish that very few of them were qualified to claim the bounty. The same thing happened this year. Only one man came forward, and all the fish he had caught were taken on the north shore. At other stations lower down, such as Méchins, Cape Chatte, Ste. Anne, Marsouis, cod struck in great abundance early in the spring, and the catch was being most satisfactory when, all of a sudden, the fish disappeared and were not again seen until the season had expired. Various reasons are given for this occurrence, but the only plausible one seems to be the early appearance of white whales and their stay on the grounds until the close of the season. In spite of this drawback, the statistics show a total catch of 4,078 cwts. of dried codfish against 4,807 in 1902 and 7,408 in 1901. Prices ruled high, being from \$5 to \$6.50 a quintal.

HERRING.

The decrease in the catch of herring, was larger than that of cod, although it may be said to have been satisfactory in some places as at Ste. Félicité, Matane and Marsouis. The reason of failure at other stations is accounted for by the early appearance and the long stay of porpoises. The injurious effect of their visit was especially felt at Sandy Bay, River Blanche and West Ste. Félicité. Prices were good, ranging from \$5 to \$5.50 a barrel, so that on the whole, people have very little to complain of. The fish I am now speaking of is the fall herring which is caught from August to the close of the season, always fetches a better price in the local markets. The spring herring which is caught so abundantly in brush fisheries from River Ouelle to Métis, has also its relative importance, although inferior in quality to the fall fish. Most of these fish are used for local consumption and manuring purposes, and the failure of this particular fishery caused great inconvenience. I am not prepared to argue whether the excessive use of these fish, in previous years, occasioned their scarcity in certain places, but I believe it would be a proper subject for investigation by the special commission appointed by the department.

EELS.

It is worthy of note that while the catch of eels from St. Valier to Rimouski has shown a steady falling off, the fisheries of Bellechasse and Lévis continue to achieve most extraordinary success, the more so, in season when the winds happen to blow from the right direction. I am half inclined to share the opinion that the improved modes of fishing adopted in the latter places have a good deal to do with the matter. It will be easily understood how wire nets set in the narrow stretches between the island of Orleans and the south shore, stand a better chance of intercepting the run of eels than coarse structures in brush lower down when heavy winds compel them to seek a shelter near the shore. When there were no eel fisheries at Montmagny, Berthier, St. Valier, St. Michel, Beaumont, Lévis, the bulk of the fishing was done at River Ouelle, Crane Island and on the grounds adjoining the small islands near by, but all this is changed now. The statistics show that out of a total catch of 274,500 lbs. only 47,100 lbs. were taken between St. Valier and Rimouski.

SARDINES.

Sardine fishing was not a success, although the statistics show that 282 barrels were caught against 243 in 1902. The best catches were, as usual, made at Cacouna, Green Island and River Ouelle. The fish were much smaller than usual.

SESSIONAL PAPER No. 22

STURGEON AND SHAD.

Though the yield of these fish was much under that of previous years, some fishermen note with pleasure that it has had a tendency to improve during the past two years. From Ste. Luce to Ste. Anne, the statistics show a total catch of 15,955 pounds of sturgeon, and from Ste Anne to St. Nicholas, 58,850 pounds. The most favoured place were Beaumont, St. Valier, St Michel, Montmagny, Cap St. Ignace, Green Island and Sacré-Cœur.

The total yield of shad amounted to 66,500 pounds against 5,775 last year; the best fishing was done at Green Island, Rivière du Loup, Kamouraska and other places higher up between St. Valier and St. Nicholas.

SALMON AND TROUT.

The local fishery officers, whom I interviewed, agree in saying that the salmon pools were full of breeding fish last fall. Fly fishing was excellent. I was told that over 300 fish had been killed with the fly in Ste. Anne des Monts river; 125 at Matane; 75 at Métis; 12 at Cape Chatte, and 25 at Rimouski. Cape Chatte river is leased and is to be efficiently guarded. I have no doubt that, with proper care, this stream will be reckoned as one of the best salmon streams on the south shore. The total yield of salmon from Marsouis to St. Nicholas, is 54,100 pounds; a slight increase over that of last year.

Trout fishing appears to grow in popular favour. Lakes in rear of the counties of Rimouski, Témiscouata, l'Islet and Montmagny are often leased to angling clubs and private individuals who vie with each other in efficiently guarding their waters. Comfortable houses are being built, roads made and efficient guardians appointed everywhere. Under such circumstances, it is not difficult to realize that trout must be on the increase. Very little illegal fishing took place this season.

SEALS AND BELUGAS OR WHITE WHALES.

Though white whales were seen in great numbers in the waters of this division, very few were killed. Thirty-two were caught in the sedentary fisheries of River Ouelle, yielding 1,800 gallons of oil. The skins fetched \$4 each, and the oil sold at 32 cents a gallon. Eighty-nine seals were killed at River du Loup, Cacouna and other places.

Only about 10,000 pounds of halibut were caught this season. This fishing is subject to great variations each year,

The statistics show a poor catch of 85,000 pounds of mixed and coarse fish.

WHITEFISH, PICKEREL AND BASS.

These fisheries may be said to have been a comparative failure, heavy winds prevented the fishermen from visiting the grounds as often as they desired. The most favoured places for the above named fish are located opposite the counties of Bellechasse and Lévis and around the small islands lying opposite the county of Montmagny.

LOBSTERS.

The season which opened so early around Quebec, was very backward on Bay des Chaleurs, as well as in the county of Gaspé. However, when I reached Grand river, I found packing in full blast, and the news received were most satisfactory. The weather had been fine so far, and fishing which began on May 27, was carried on under most favourable circumstances until about the middle of June. Early in that month, the pack at all canneries, except one or two, exceeded that of previous year for the whole season. No loss of gear occurred, and prices reached \$2 or \$3 more per case than usual. Strict attention was needed to see that the regulations were faithfully complied with,

4-5 EDWARD VII., A. 1905

but I am happy to say that but two very slight contraventions came to my notice, which I considered unadvisable to punish. The best spirit prevailed everywhere, and fishermen as well as packers seemed to be impressed with the necessity of keeping the strict letter of the law. The total catch this year is 4,166 cases against 3,181 in 1902.

The grounds are everywhere said to be well stocked, and generally speaking, the lobsters were of large size. I measured a great many which I found to be from 11 to 13 inches.

I have the honour to be, sir,
Your obedient servant,

N. LAVOIE,
Inspector of Fisheries.

REPORT ON THE FISHERIES OF THE WESTERN AND INLAND
DIVISION OF QUEBEC FOR THE YEAR 1903, BY INSPECTOR
A. H. BELLIVEAU.

OTTAWA, March 20, 1904.

To the Dominion Commissioner of Fisheries.

SIR,—Notwithstanding the appointment of another inspector of fisheries for that part of the St. Lawrence extending from Huntingdon to Three Rivers, thirty two counties, mostly inland, are still left under my supervision.

For greater convenience in establishing comparisons in the yields of the different kinds of fish with those of former years, the same sub-divisions as heretofore have been adhered to, even when under different officers.

Difficulty to secure statistics.—Since the provincial authorities do not demand the fishery statistics from their overseers, the collection of any reliable data is becoming more and more difficult. Were it not for the necessity of classifying the different species of fish, a fair estimate could be arrived at of the quantity brought week after week to the Bonsecours and other Montreal markets as well as to other large towns. Some simple and inexpensive means could be devised which would induce even the suspicious fishermen to keep a better account of their weekly catch of fish. The fear of an increased license fee very often induces the interested person to minimize his catch. These apprehensions are now groundless, as while the provincial government now issues the fishing permits, the federal requires the statistics to continue a system of publication initiated since confederation.

Soft fish.—In most of the inland waters of this district, fish are not only being generally depleted, but the better grades seem to be replaced by inferior species. To overfishing and indiscriminate use of undersized gear this regrettable result can be chiefly ascribed. The fortunate resident in the vicinity of large towns and cities can realize more for his unpalatable *poisson-mou* than the Lake St. John sportsman would for his rare and gameful ouananiche. Every kind of fish, on a big market, finds a purchaser, the best grades going first, then it seems that the customers not seeing exactly what they would wish for, take what there is left. Thus bullheads, catfish, eels and even the common carp are all disposed of at remunerative prices in a comparatively short time.

No nets in July and August.—The enforcement of all net prohibition during the warm months of July and August has proven of great benefit even to those who at first were against it, in saving the large quantities of fish which were usually spoiled and wasted during the warm season. Very few genuine fishermen now complain of this curtailment; on the contrary I have been asked to extend this restriction both in time and area.

The Ottawa District.—The Ottawa river, the most important tributary of the mighty St. Lawrence and the neighbouring lakes shows a decline in the best kind of fish such as trout, bass, maskinonge and whitefish, while bullhead, catfish and other coarse fish still yield largely to the total aggregate of this sub-division. Fewer persons now take licenses

SESSIONAL PAPER No. 22

in this district. The capital and its transpontine neighbour constitute goods markets where the fishermen west of Carillon may dispose of their catch at a fair compensation. This division comprises Lake Temiscamingue as well as the numerous other lakes and streams of Pontiac.

Eastern Townships.—In the beautiful lakes of this part of the province such as Megantic, Memphremagog, Massawippi, Aylmer, St. Francis, Brompton, &c., it is noticeable that the protection is unfortunately insufficient. In these waters the best quality of fish are being depleted by the surrounding poachers. Where no revenue is derived from the issue of licenses, the provincial authorities seem less disposed to disburse for efficient services. The general prohibition of all netting by Order in Council in the townships was a good measure in the right direction, but it will remain ineffective if not judiciously enforced. Only on lakes, where fish and game clubs are organized, is a real interest taken in earnest protection of the finny tribe. When in Newport, Vt., I was informed that nearly a thousand pounds of lunge netted on their spawning beds in Canadian waters had been disposed of there, in a single morning. Allowing for some exaggeration, it is still a deplorable state of affairs. Several poachers were prosecuted and fined for illegal netting in Memphremagog lake, a couple of whom went to jail rather than pay the fine. I must admit that there is one good officer on this lake, but he is somewhat handicapped in different ways, and it is impossible for one man to attend to both sides of a lake over 30 miles long and at some places three or four miles wide.

Missisquoi Bay.—In this bay, the northern part of Lake Champlain, seining was again tolerated during the spring. The yield of fish was fairly good, over 35,000 lbs. of pickerel and nearly as much perch being captured in the few weeks of spring fishing. These fish are shipped frozen to the New York markets which they reach in a few hours and where they bring very remunerative prices, netting in some instances over fifteen cents per lb. The mode of seining in Missisquoi bay was fully described in my last annual report, p. 151.

The above mentioned prices for pickerel being more than 100 per cent above the rates used in the statistical table, are quoted as an offset to parties who are inclined to consider our prices too high. There are many similar cases.

Richelieu River.—In this stream, which is the outlet of Lake Champlain joining the St. Lawrence at Sorel, especially in that part between the boundary line and Chambly, the fisheries seem fairly well preserved. The fishermen are now pleased that they have adhered to the regulation suggested by the department a few years ago. Each licensee is limited to four hoop nets (verveux) and the regulation mesh of $1\frac{1}{2}$ to $1\frac{1}{4}$ inch square has been maintained. The result is that the fish caught are of a uniformly large size and command better prices than those of other localities where the mesh of hoop-nets is reduced even below the square inch.

Eel fisheries.—The most important fisheries of this district are the two large eel weirs of Iberville and St. Therèse. These extensive weirs have been operated by the present occupants and their ancestors for over a century. The last improvement, (a kind of granolithic bottom upon which the wire parts of weir are easily adjusted or removed by certain lengths), though costly, saves a great deal of labour. There are three boxes or traps at regular distances along the leaders which extend nearly across the river in so many broadened V shapes. These weirs are valued at over \$75,000. The traps are visited early every morning. The eels therein are placed in a boat with a scoop net, then conveyed to reservoirs where they are kept alive until shipping days, two or three times a week. Without a touch of spear or hooks of any kind these eels reach New York still alive and in prime condition, where they command the highest prices.

These fish are all from Lake Champlain and are thus captured in July, August and September when they seem to be drifting seaward with the current. They only travel at night sliding near the water surface to eat a certain kind of fly which abounds there at that time of the year. The darker the night the better the catch.

While they are captured in the Richelieu and Lake St. Louis as early as June, lower down the St. Lawrence, say about the Ile aux Coudres, none are taken before September and then they are still heading for the sea.

After these fresh water eels reach the sea, what becomes of them, do they ever attempt to again ascend the streams from whence they came? None are ever noticed going against the current, but they are all captured at night while in their descent to the gulf whether by weirs, night lines or with the spear. It would be interesting to have more information from scientists about the habitat of the eel.

Less seems known about eels than about any other kinds of Canadian commercial fishes. Even their way and time of spawning are not fully determined. No ova is ever found in them at any period of the year, hence some fishermen conclude that they do not spawn at all like other fishes, but bring forth their young already hatched. The lessees of the above mentioned weirs at Iberville are so thoroughly convinced of this fact, that they sent sample eels with sacks of alleged tiny eels inside of them to Dominion Commissioner of fisheries for verification. Unfortunately this sample reached the department in a state rendering it impossible for the scientist to establish whether the alleged infant eels were or were not merely parasites.

The experiment will certainly be repeated, at the first opportunity, so anxious are these parties, who have handled eels all their lives, to convince others of their contention.

A remarkable feature noticed, when visiting these weirs, was the absence of other kinds of fish only a few bullheads were found with the hundreds of eels picked that morning. They were either returned to the water or given to the poor at the Landing. This absence of other species was thus explained to me. By the time that the weirs are set (about the middle of June) all the spring spawning fishes have already ascended to the upper waters to deposit their eggs, and by the time these return the wire barriers have been removed.

Saguenay District.—In that part of the district from Quebec city to the Saguenay, there is hardly any notable change from the previous record, a steady decline is reported by the weir fishermen of that coast. Eels are now the chief item in the yield of that locality extending from Isle d'Orleans, Ile aux Coudres and along Charlevoix.

Notwithstanding the efficient services of the local fishery guardians, there is still considerable salmon poaching on the famous Saguenay river. Settlers in the vicinities of favourable landing places, come to the river side, and shielded by the wooded banks in case of surprise, make provision of salmon for their domestic purposes. These poachers are disguised and it is almost impossible to either prove their identity and obtain a conviction. Quite a few illegal nets were seized last season.

Lake St. John.—The fisheries were last year prosecuted with even more vigour than usual in Lake St. John. A couple of fish buyers stimulating the demand, shipped a few hundred pounds weekly from two railway stations on each side of this large inland sea. Licenses for a large quantity of gill nets have been issued by the local government. There is even a large steam tug using hundreds of fathoms of nets, which savors too much of the commercial fishing. For how long will this overfishing prove as remunerative to the individual as it is now detrimental to the preservation and continuation of a judicious supply to the neighbouring settlers. It is doubtful whether this fishing tug venture will be a paying investment to its owner. I think not. At any rate, it has a damaging effect upon the tourists who have come thousands of miles to seek the haunts of the far renowned ouananiche.

While it might be an inconvenience to deprive the inhabitants around this large lake of the privilege of using a net to provide fish for domestic or local consumption, it seems to me that too many so-called commercial permits have been issued. Some restriction of netting would be of more benefit to the community at large, than the paltry gain to the few net fishermen. It is difficult however to convince the interested individual of such facts. This is a matter which concerns the provincial authorities as they issue the permits to fish.

There is a regulation prohibiting the capture of ouananiche with nets, but when they are once gilled in nets licensed for other fish, it would be useless to return them to their native elements, as few would survive their temporary imprisonment. I have been assured by many net fishermen that very few ouananiche are captured in their nets, as they seem to possess the instinct to keep away from them, especially when the water is clear. The netters catch consists chiefly of pickerel, pike, whitefish and some coarse

SESSIONAL PAPER No. 22

fish. Whether the scarcity of the famous land-locked salmon is attributable to netting or other causes, the fact remains that notwithstanding Mr. Beemer's efforts to restock these waters with an annual output of over a million fry, this famous sporting fish was scarcer last year than ever.

Fishways.—Last fall a fishway of the new Wilson patent model was built in the dam across the St. Francis river at Drummondville. It is the first of the kind built in Canada. This model was patented so recently, that it is not amongst the twenty different kinds described in Prof. Prince's special article, in the annual report of two years ago on the *Fishway Problem*.

Treating this subject, the Dominion Commissioner had summarized thirteen different points which he considered conducive to the efficiency of a fishway. Mr. Wilson's model certainly seems to meet most of these vital points, in fact all but one of them. Without wishing to claim any superiority for this over similar devices, I must admit nearly every person who examined the Drummondville pass either during its construction or after its completion was highly hopeful that it would fulfil its requirements.

This fish-pass consists of a breakwater on the pond side of the dam, comprising a V shaped frame and a covered structure with several transverse baffle sills in it adapted to rest near the bottom of the stream and having perforated side walls which increase in height towards the dam; the said structure to have transverse beams near the upper edges of said walls and also with a breakwater and gate at the lower portion of the dam. Thus, in reality the small opening made through the dam as near its bottom as possible, is substantially obstructed by means of suitable baffles or breakwaters which materially reduce the force of the current passing through the opening, thus enabling the fish to ascend against the current. These different breakwaters will, the inventor claims, provide sufficient eddies or still water pockets to give the fish a rest on their ascent before emerging from the fishway up stream.

Before this first fishway was finally covered, it took thirty-three seconds for a small stick to go through and out of the fishway with a fair pressure of water. Our conclusion was that any fish that could not ascend such obstruction was not worthy of receiving protection. The dam where this first test was made is less than eight feet high, the doubtful point, in my mind, is how would this pass work should the water pressure be twice as high or even more.

One very favourable point in the above described model is the fact that being built at the bottom of the pond, neither ice nor freshets, however heavy, can ever injure it unless the whole dam is carried away.

Now that industry seeks to utilize every possible water power, efficient fishways will have to be adopted in the barriers furnishing such power to satisfy the sporting community who would deplore the sight of their neighbouring streams, becoming entirely depleted of fish life. It sometimes becomes a very difficult question to reconcile the lumber or other manufacturing industries to the fisheries interests. In my humble opinion, it behoves the department to decide and prescribe the most suitable and best adapted fishway to each locality requiring them.

Respectfully submitted,

A. H. BELLIVEAU,

Inspector of Fisheries.

PROVINCE OF QUEBEC—Gulf of St. Lawrence District.
RETURN showing the Number, Tonnage and Value of Vessels, Boats, Nets, &c., also the Kinds of Fish in the County of Bonaventure,
Province of Quebec, for the Year 1903.
RESTIGOUCHE SUBDIVISION (Tide Head to Magnasha).

Number.	District.	FISHING VESSELS AND BOATS.						FISHING GEAR OR MATERIALS.						KINDS OF FISH						
		Vessels.			Boats.			Gill Nets.			Seines.			Trawls.		Salmon, fresh, lbs.	Herring, salted, lbs.	Herring, fresh, lbs.	Herring, smoked, lbs.	Number.
		Number.	Tonnage.	Value.	Men.	Number.	Value.	Men.	Number.	Fathoms.	Value.	Number.	Fathoms.	Value.	Number.						Value.
1	Restigouche	..	..	..	..	23	420	60	18	4000	3750	..	..	..	..	25000	50	15000	..	1
		Bonaventure County.																		

BONAVENTURE SUBDIVISION (Magnasha to Paspébiac Point).

1	Magnasha and Nouvelle	..	..	..	..	60	1000	120	164	4100	2550	3	100	..	..	10000	200	5000	2000	1
2	Carleton	..	..	..	..	150	1800	300	410	8500	7050	6	190	..	..	26000	250	7500	10000	2
3	Maria	..	..	..	..	150	1800	310	462	8620	7850	3	90	..	..	36000	800	10000	8000	3
4	New Richmond and Black Capes	..	..	..	..	90	1500	180	186	4000	2950	..	..	..	..	14300	150	7000	4000	1
5	Caplin	..	..	..	..	190	2850	360	600	11000	5500	3	100	..	..	..	600	6000	5000	5
6	Bonaventure	..	..	..	..	320	4000	510	4102	20200	10525	45	1200	20	200	11200	150	4000	5000	6
7	New Carlisle	..	..	..	..	60	800	75	121	2300	1250	12	400	5	50	1150	100	10000	6000	7
8	Paspébiac	..	..	..	..	180	5000	400	201	4100	2075	60	1900	1750	110	550	250	4500	2500	8
Totals		6	320	5400	36	1200	18750	2255	3246	67820	39750	132	3980	3490	135	1650	99200	2500	54000	12500

PORT DANIEL SUBDIVISION (Paspébiac Point to Point Macquereau).

1	Hopetown	..	..	..	..	75	2800	125	100	2200	1320	13	340	450	35	700	700	260	..	3500	1
2	Nouvelle	..	..	..	..	85	2550	144	90	1800	1180	14	385	510	32	660	1000	600	..	3000	2
3	Shigawake	..	..	..	..	48	720	67	70	1400	840	8	280	350	16	320	..	450	..	5000	3
4	Port Daniel	..	..	..	..	187	5610	278	350	7000	5600	25	800	950	124	1488	24865	700	..	8500	4
5	Anse à Gascons	..	..	..	..	193	7700	285	408	8120	6500	16	480	700	144	2150	4672	1000	7000	..	5
Totals		..	..	..	..	588	19380	899	1018	20520	15440	76	2285	2960	351	5318	31237	3040	7000	20000	..

Return showing the Kinds and Quantity of Fish, &c.—Province of Quebec—Continued.

RESTIGOUCHE SUBDIVISION (Tide Head to Maguasha.

Number.	Districts.	KINDS OF FISH.													FISH PRODUCTS.			Seal skins, number.	TOTAL VALUE OF ALL FISH.	Number.
		Lobsters, pre- served in cans, lbs.	Lobsters, fresh, in shell, cwt.	Cod, dried, cwt.	Cod, tongues & sounds, brls.	Haddock, fresh, lbs.	Haddock, dried, cwt.	Hake, dried, cwt.	Halibut, lbs.	Trout, lbs.	Shad, brs.	Smelts, lbs.	Eels, brls.	Tom cod or frost fish lbs.	Fish oil, galls.	Fish as bait, brls.	Fish as manure, brls.			
1	Restigouche		30							12000	150000			10000			500		15,675 00	1
	Bonaventure County.																			

BONAVENTURE SUBDIVISION (Maguasha to Paspébiac Point).

1	Maguasha and Nouvelle		5	175		10000				10000	10		10	5000	60	60	8000	9,560 50	1
2	Carleton	600	20	50		3500				6000			6	3500	17	25	10000	12,987 60	2
3	Maria		10	150		5000		10		7000	4		40	5000	50	60	15000	20,870 50	3
4	New Richmond and Black Capes			50		1000				13000	4		12	1000	17	20	3000	6,965 10	4
5	Caplin		5	1500	2	10000	20			500				1400	500	500	20000	21,007 00	5
6	Bonaventure	5400	10	3000	4	15000	150	71	1900	12200		6500	18	4000	1000	900	5000	25,239 75	6
7	New Carlisle		10	200	1	2000	15			800				1500	66	75	10000	7,222 30	7
8	Paspébiac			4500	10	9000	200	80		1200		10000	3	2000	1500	1500	12000	32,140 00	8
Totals		6000	60	9625	17	55500	385	161	1900	50700	18	16500	89	24000	3210	3140	83000	135,992 75	

PORT DANIEL SUBDIVISION (Paspébiac Point to Point Macquereau).

1	Hopetown	16000		1700	10		300			1500				2000	1300	350	2000	16,155 00	1
2	Nouvelle			2000	7		250		3000	2000				3000	1500	500	2500	15,820 00	2
3	Shigawake	8500		700	4		100			300					600	300	2400	9,620 00	3
4	Port Daniel	25000		3300	10		300		3500	2500		25000		3500	2200	800	2800	35,639 25	4
5	Anse à Gascons	4800		4700	20		300		4000	7000					3300	2000	1000	34,544 40	5
Totals		54300		12400	51		1250		10500	13500		25000		8500	8000	3050	10700	111,778 65	

4-5 EDWARD VII., A. 1905

RETURN showing the Number, Tonnage and Value of Vessels and Boats and the
County

GRAND RIVER SUBDIVISION

DISTRICTS.	FISHING BOATS.			FISHING GEAR OR MATE-						
	Boats.			Gill Nets.			Seines.		Trawls.	
	Number.	Value.	Men.	Number.	Fathoms.	Value.	Number.	Fathoms.	Value.	Number.
<i>Gaspé County.</i>										
1 Newport	138	5220	329	286	5720	2604	1	45	40	92
2 Pabos.	62	3080	153	107	2145	997	3	110	90	27
3 Grand River	107	8440	386	302	7800	3580	2	80	50	85
4 Cape Cove	139	10050	387	370	8200	4420	10	330	245	76
5 Percé and Bonaventure Island . . .	101	4370	226	220	4180	1772	3	140	75	18
6 Corner of Beach	23	500	46	46	920	1820	8	200	160	2
Totals	570	31660	1527	1331	28965	15193	27	905	660	300

GASPÉ BAY SUBDIVISION

1 Barachois	160	6700	165	72	1870	1740	13	600	500	
2 Mal Bay	124	6203	130	65	1650	1600	5	300	250	
3 Point St. Peter	80	1900	100	90	2800	1850	4	125	160	
4 Chien Blanc to Sandy Beach . . .	268	7800	214	210	6800	5000	13	550	475	
6 Gaspé Bay North and South	45	500	52	115	4000	3000	10	400	450	
6 Peninsula and Little Gaspé	65	800	80	100	3500	3000	2	40	25	
7 Grande Grève and Ship Head . . .	82	2150	90	76	2100	1470	8	200	200	
8 Cape de Rosier to Jersey Cove . . .	245	4650	275	105	3279	1100	4	80	65	
9 Griffin Cove	128	2000	230	220	3100	950	1	25	12	
10 Fox River	203	3000	225	230	4000	1200	6	180	85	
11 Little Cape to Echourie	72	900	75	60	1200	375				
12 Point Jaune to Fame Point	50	460	61	30	320	150				
Totals	1519	37060	1697	1373	34619	21435	66	2500	2222	

SESSIONAL PAPER No. 22

Quantity and Value of Fish, &c., in the Province of Quebec—*Continued.*
of Gaspé.

(Point Macquereau to Barachois).

Value.	Lobsters canneries, number.	KINDS OF FISH.												TOTAL VALUE OF ALL FISH.		Number.
		Salmon, fresh, lbs.	Herring, salted, brls.	Lobsters, preserved in cans, lbs.	Lobsters, fresh in shell, cwt.	Cod, dried, cwt.	Cod, tongues and sounds, brls.	Haddock, dried, cwt.	Hake, dried, cwt.	Habibut, lbs.	Smelts, lbs.	Fish oil, galls.	Fish as bait, brls.			
\$. c.														\$. c.		
1790	2	3100	60	16000	...	6300	11	15	25	1200	2000	3600	2000	38,231	25	1
598	3	16100	104	14304	...	1080	6	60	30	1900	6000	700	500	13,881	50	2
1780	2	1740	602	4800	...	10750	17	145	110	2600	4000	7000	2650	60,019	50	3
1483	1	2200	304	23000	....	8470	50	225	...	4000	2000	5725	1800	51,765	50	4
144	2	..	152	14400	...	5375	...	90	...	200	...	3200	1400	31,821	50	5
20	1	12700	40	9500	...	900	...	...	...	...	...	550	450	9,985	00	6
5815	11	35840	1262	82004	..	32875	84	695	165	9900	14000	20775	8800	205,704	25	

(Barachois to Fame Point).

...	...	8000	250	...	...	5100	...	...	...	...	2000	4000	1000	28,475	00	1
...	1	3000	175	12000	..	4900	...	...	...	...	...	3200	950	28,822	50	2
...	...	...	90	...	...	4000	...	...	...	...	...	3000	800	20,505	00	3
...	3	34000	225	10000	10	5000	...	...	...	...	...	4000	1000	35,562	50	4
...	...	44000	10	...	...	...	...	...	...	...	95000	...	...	13,595	00	5
...	...	24000	25	...	...	1200	...	...	...	...	...	750	250	10,912	50	6
...	...	10000	100	...	...	2500	...	...	...	...	...	2000	500	15,050	00	7
...	...	...	125	...	...	6000	10	2000	...	...	...	4750	1600	37,487	50	8
...	...	...	80	...	...	5000	6	1800	...	...	...	4000	1000	31,020	00	9
...	...	...	110	...	...	6000	12	1000	...	...	...	4500	1500	36,915	00	10
...	...	...	55	...	...	2200	...	...	...	...	...	1000	450	11,022	50	11
...	...	...	25	...	...	1500	...	...	...	...	...	950	300	7,597	50	12
...	4	123600	1270	22000	10	44000	28	4800	...	...	97000	32150	9350	277,065	00	

MONTS LOUIS SUBDIVISION (Fame Point to Claude River).

Number.	Districts.	FISHING BOATS.										FISHING GEAR OR MATERIALS.										LOUSTER PLANT.
		Gill Nets.					Seines.					Hand Lines.					Cameries.					
		Number.	Value.	Men.	Number.	Fathoms.	Value.	Number.	Fathoms.	Value.	Number.	Fathoms.	Value.	Number.	Value.	Number.	Value.					
<i>Gaspé County.</i>																						
1	Grand Etang	6	250	11	500	400	1	30	30			22	50									
2	St. Yvon	24	1100	43	2400	1800						86	180									
3	Chlorydorne	10	1600	68	3600	2800	2	80	50			136	290									
4	Petite Anse and Frigate Point	12	800	62	2640	1700						124	270									
5	Grand and Little Vallee.	54	2100	87	3600	2800	1	30	30			174	390									
6	Magdalen River	30	600	60	1800	1000						84	170									
7	Manche d'Espece and Gros Male	58	750	79	3000	1700						158	300									
8	Anse Pleureuse and Monts Louis	102	2000	121	5400	5100	3	90	100			242	420									
9	Rivière à Pierre and Claude	52	650	73	3000	2100						146	220									
Totals.		408	10750	586	25940	19400	7	230	240			1172	2200								800	

STE. ANNE DES MONTS SUBDIVISION (Marsouins to Cap Chatte).

1	Marsouins	5	100	9	245	205						20			20							
2	Martin River	8	150	10	450	250						32			32							
3	Cap au Renard and Anse à Jean	9	100	9	185	200						36			36							
4	Ste. Anne's	90	1000	130	6000	5000						360			360							
5	Cape Chatte.	19	250	25	1000	750						76			76							
Totals.		131	1600	183	7830	6405						524			524							

RETURN showing the Kinds and Quantities of Fish and Fish Products in the County of Gaspé, Province of Quebec, for the Year 1903.
MONT'S LOUIS SUBDIVISION (Pame Point to Claude River).

Number.	Districts.	Kinds of Fish.										Fish Products.			Total Value of All Fish.	Number.
		Salmon, fresh, lbs.	Herring, salted, lbs.	Herring, fresh, lbs.	Herring, smoked, lbs.	Lobsters, fresh, in shell, cwt.	Cod, dried, cwt.	Cod, tongues and sounds, lbs.	Haddock, dried, cwt.	Halibut, lbs.	Trout, lbs.	Fish as oil, culls.	Fish as bait, lbs.	Fish as manure, bbls.		
Gaspé County.																
1	Grand Etam.	.....	30	.....	.....	.....	750	.....	50	.....	.....	500	355	.....	4,342 50	1
2	St. Yvon	150	100	.....	.....	.....	2350	.....	75	11400	.....	1500	500	.....	13,620 00	2
3	Chlorodydorne	500	100	.....	.....	.....	3100	.....	80	22500	.....	2000	800	300	19,020 00	3
4	Petite Anse and Frigate Point	.....	175	.....	.....	.....	1650	.....	70	11100	.....	1000	500	.....	10,582 50	4
5	Grand and Little Valley	1000	350	.....	.....	.....	2600	.....	160	3500	1000	1800	800	100	16,275 00	5
6	Magdalen River	3700	150	.....	.....	.....	650	.....	45	700	.....	350	230	100	5,095 00	6
7	Manche d'Épée and Gros Mâle	1500	580	.....	.....	.....	1200	.....	100	1600	.....	750	450	200	9,770 00	7
8	Anse Pleureuse and Monts Louis	8000	1325	1000	600	.....	1650	9	115	700	500	1000	600	200	16,904 50	8
9	Rivière à Pierre and Claude	6500	1640	.....	.....	.....	450	.....	55	1400	.....	250	250	120	11,520 00	9
Totals.....		24350	4450	1000	600	.....	14400	30	750	52900	1500	9150	4485	1020	107,129 50	.....

STE. ANNE DES MONT'S SUBDIVISION (Marsouins to Cape Chatte).

1	Marsouins	.....	.....	1300	1200	1500	.....	115	.....	850	.....	57	20	.....	6,824 60	1
2	Martin River	.....	160	1200	.....	.....	160	.....	.....	555	.....	80	25	.....	1,569 00	2
3	Cap au Renard and Anse Jean	.....	720	1000	.....	.....	200	.....	.....	.....	.....	100	30	.....	1,129 00	3
4	Ste. Anne's	.....	9000	1600	2000	.....	1800	.....	.....	2300	1000	900	200	100	18,110 00	4
5	Cape Chatte	.....	1600	300	1000	.....	550	.....	.....	.....	.....	275	50	100	4,362 50	5
Totals.....		12670	3760	6700	2000	.....	2825	.....	3705	1000	1412	325	200	.....	31,495 10	.....

RETURN showing the Number, Tonnage and Values of Vessels, Boats and Fishing Materials, &c. — Province of Quebec

County of Gaspé — Continued.

MAGDALEN ISLAND SUBDIVISION SOUTH.

Districts.		Fishing Vessels and Boats.										Fishing Gear or Materials.					
		Vessels.			Boats.							Gill Nets.			Trap Nets.		
Number.	Tonnage.	Value.	Total fish- catch.	Number.	Value.	Mon.	Number.	Fathoms.	Value.	Number.	Fathoms.	Value.	Number.	Value.	Number.	Value.	Hand Lines.
		%			%				%			%		%		%	
1 Entry Island	2	25	500	9	8	250	18'	80	1820	180					32	15	1
2 Amberst Island					151	6050	360	2105	3715	8350			8	1200	940	206	2
3 Grindstone Island					231	16550	662	209	1225	1060			5	675	1200	365	3
Totals	2	25	500	9	391	22850	1000	2394	43190	9890	13	1875	11	6875	2172	586	

Gaspé County.

MAGDALEN ISLAND SUBDIVISION NORTH.

1 All Right Island				117	3240	315	820	18800	5000				7	5500	350	95	1
2 Grand Entry	2	24	400	10	27	600	66	41	1320	350			6	1000	75	35	2
3 Grosse Isle				16	320	45	1	120	36				1	2500	12	21	3
4 Byron Island				2	45	6	3	90	24				1	1000	6	3	4
5 Wolf Island				5	180	21	7	210	60						26	13	5
Totals	2	24	400	10	170	4385	453	878	20540	5470			18	13000	199	167	

22—11

MAGDALEN ISLANDS SUBDIVISION—SOUTH.

Number.	Districts.	Lobster Canneries Number.	KINDS OF FISH AND FISH PRODUCTS.														Total Value of All Fish.	Number.
			Herring, salted, bbls.	Herring, fresh, lbs.	Herring, smoked, lbs.	Mackerel, fresh, lbs.	Mackerel, salted, bbls.	Lobsters, preserved in cans, lbs.	Cod, dried, cwt.	Cod, tongues and sounds, bbls.	Haddock, dried, cwt.	Eels, bbls.	Fish oil, galls.	Fish as bait, bbls.	Fish as manure, bbls.	Seal skins, number.		
	<i>Gaspé County.</i>																\$	cts.
1	Entry Island.....	70	17350	1500	225	35	16	60	56	40	2146	1370	300	40	3,924	30	1	24
2	Amherst Island.....	3 2340	13000		2240 147072	4293									104,178	80	1	22
3	Grindstone Island.....	9 4175			3865 144960	3965	11	40	1983	23000	725				166,972	40	2	33
	Totals.....	12 6585	30350	1500	6330 292032	8293	30	100	4185	24410	1025				273,075	50		

MAGDALEN ISLANDS SUBDIVISION—NORTH.

Districts.	KINDS OF FISH AND FISH PRODUCTS.										Lobster Canneries	Number.				
	Herring, salted, bbls.	Herring, fresh, lbs.	Herring, smoked, lbs.	Mackerel, fresh, lbs.	Mackerel, salted, bbls.	Lobsters, preserved in cans, lbs.	Cod, dried, cwt.	Cod, tongues and sounds, bbls.	Haddock, dried, cwt.	Eels, bbls.	Fish oil, galls.	Fish as bait, bbls.	Fish as manure, bbls.	Seal skins, number.	TOTAL VALUE OF ALL FISH.	Number.
1 All Right Island.....	4 6000	.....	.....	.....	3202	73536	586	20	125	5	893	1170	500	116	99,093 90	1
2 Grand Entry Island.....	8 525	40000	.....	.....	382	176368	213	.....	.....	10	186	270	200	28	54,638 80	2
3 Grosse Isle.....	6 121	.....	.....	.....	178	52608	75	.....	.....	.....	88	70	90	15	16,899 15	3
4 Bryon Island.....	3	.....	.....	.....	.....	62064	.....	.....	.....	.....	.....	.....	.....	.....	15,516 00	4
5 Wolf Island.....	1 142	.....	.....	.....	107	9600	114	1	.....	.....	87	100	100	8	5,403 10	5
Totals.....	22 6788	40000	.....	.....	3869	374176	988	21	125	15	1254	1610	890	167	191,550 95	

County of Saguenay.

GOLDBOUT SUBDIVISION (Tadoussac to Jambons).

Number.	DISTRICTS.				FISHING VESSELS AND BOATS.				FISHING GEAR OR MATERIALS.			
					Vessels.		Boats.		Gill Nets.		Seines.	
	Number.	Tonnage.	Value.	Men.	Number.	Value.	Men.	Number.	Fathoms.	Value.	Number.	Fathoms.
<i>Saguenay County.</i>												
1	Tadoussac				4	200	4	4	475	475		
2	Bergeronnes and Escoumains				10	300	12	9	1000	750		
3	Mille Vaches and Portneuf				12	360	15	4	380	300		
4	Colombiers and Sault au Cochon				4	80	4	5	400	350		
5	Bersimis				3	50	3	2	150	100		
6	Pointe aux Outardes	1	11	150	2	280	14	18	540	540		
7	Godbout and Pointe des Monts	3	42	370	8	1010	57	69	2840	2840	3	180
8	Trinity Bay and Cariboo	1	28	320	2	940	40	56	2820	2820	1	45
9	Egg Island and English Point				47	980	53	32	1020	1020	1	60
10	Pentecost to Jambons	1	30	350	3	570	23	15	600	600	1	40
Totals		6	111	1190	15	4770	225	214	10225	9795	6	325
										415	173962	

MOISIE SUBDIVISION (Jambons to Pigou).

1	Ste. Marguerite Bay				5	420	17	13	822	775	2	55	133	3237
2	Carusel Islands	1	13	200	3	320	8	10	840	800	1	20	50	
3	Seven Islands Bay	2	80	1375	8	2400	58	29	735	1550	2	50	120	18226
4	Moisie and Pigou	1	25	800	4	2000	55	42	2451	3240	4	95	225	200117
Totals		4	118	2375	15	5250	138	94	4848	6365	9	220	528	221580

County of Saguenay.

GODBOUT SUBDIVISION (Tadoussac to Jambons).

DISTRICTS.	KINDS OF FISH AND FISH PRODUCTS.										TOTAL VALUE OF ALL FISH.	Seal skins, No.	Number.		
	Herring, salted, bbls.	Herring, fresh, lbs.	Mackerel, salted, bbls.	LoBSTERS, preserved in cans, lbs.	Cod, dried, cwt.	Cod, tongues and sounds, bbls.	Halibut, lbs.	Trout, lbs.	Smelts, lbs.	Fish oil, galls.				Fish as bait, bbls.	Fish as manure, bbls.
Saguenay County.															
1 Tadoussac	20	3000						5000		150			50	1	8,637 50
2 Bergeronnes and Escommins	30	4000						3000		120			40	2	6,476 00
3 Mille Vaches and Portneuf	25	1500						5000		135			45	3	4,371 75
4 Colombiers and Sault au Cochon	10							3000		60			20	4	3,450 50
5 Bersimis	15							2000	4600	105			35	5	920 25
6 Pointe aux Outardes	205		2		30		11390	1200	2500	426	5		142	6	745 30
7 Godbout and Pointe des Monts	53				271		3550	300		639	30	36	168	7	9,439 70
8 Trinity Bay and Cariboo	115				147		1000	300		115	20	10	6	8	8,155 40
9 Egg Island and English Point	95			1392	241	1	1100			240	30	12	5	9	2,881 75
10 Pentecost to Jambons					462	2				410	50		2	10	3,585 00
Totals	568	8500	2	1392	1154	3	17040	19800	7100	2400	135	58	573		48,666 15

MOISIE SUBDIVISION (Jambons to Pigeon).

1 Ste. Marguerite Bay	25				204	3	829	400		300	40	10	51	1
2 Caroussel Islands	35				195	2	756			220	35		41	2
3 Seven Islands Bay	15				912	4	1243			1549	150	40	98	3
4 Moisie and Pigeon					889	5	2822	950		1342	130	52	130	4
Totals	75				2200	14	5644	1350		3411	355	102	320	57,309 70

Return showing the Number, Tonnage and Value of Vessels, Boats, Nets, &c.—Province of Quebec—*Continued.*

County of Saguenay.

MINGAN SUBDIVISION (Pigou to Watsheeshoo).

Number.	FISHING VESSELS AND BOATS.										FISHING GEAR OR MATERIALS.														
	Vessels.					Boats.					Gill Nets.					Seines.					Trap Nets.				
	Number.	Tonnage.	Value.	Men.	Number.	Value.	Men.	Number.	Fathoms.	Value.	Number.	Fathoms.	Value.	Number.	Value.	Number.	Value.	Number.	Value.						
DISTRICTS.																									
Saguenay County.																									
1					26	1270	52		1			6	210	185											
2					29	1390	55		1	150	100	5	300	300			2		1000						
3					50	2500	95		3	300	250	8	350	350			1		500						
4					20	800	45		1	200	200	3	300	200											
5					53	2500	150		4	600	600	5	400	500											
6		19	200	3	60	3000	120		10	2500	2000	5	350	300											
7					25	1000	53		3	375	300	3	120	120											
8					3	120	3		3	450	400														
9		172	2000	34	110	7500	250		10	550	550	10	600	1200			3		1000						
10					15	500	20		6	750	500	2	80	60											
Totals.				37	391	20580	843	41	5875	4700	47	2710	3315	6	2500										

RETURN showing the Kinds and Quantities of Fish and Fish Products, &c.—Province of Quebec—Continued.

County of Saguenay.

MINGAN SUBDIVISION (Pigon to Watsheeshoo).

Number.	Districts.	KINDS OF FISH.										Fish Products.		Seal skins, number.	TOTAL VALUE OF ALL FISH.	Number.
		Salmon, fresh, lbs.	Salmon, salted, lbs.	Herring, salted, lbs.	Lobsters, preserved in cans, lbs.	Cod, dried, cwt.	Cod, tongues and sounds.	Halibut, lbs.	Trout, lbs.	Fish oil, galls.	Fish as bait, lbs.					
Saguenay County.																
1	River aux Grains and Chaloupe	1500				1200		1000		660	120	20	5,903 00	1		
2	Sheldrake	1000	4			3000		500	500	1530	300	10	14,821 50	3		
3	Thunder River	1000				1000	10	2000	500	2075	400	25	19,863 75	3		
4	Dack to Jupitagan	1000				2000		500	300	1000	200		9,880 00	5		
5	Magpie	5000	10			4000	10	1000	500	2000	400		20,600 00	4		
6	St. Johns River	45000		20		4000	10	750	2000	2030	400	10	28,686 50	6		
7	Long Point	2000				2500				1230	250	10	12,406 50	7		
8	Mingan and Romaine	8000				4500				225		75	1,963 25	8		
9	Esquimaux Point	1000	10	150	4800	50		1000		3600	500	450	24,617 50	9		
10	La Cornelle to Watsheeshoo				9000				1000	325	10	100	3,162 50	10		
Totals		64500	24	170	13800	25250	30	6750	6800	14675	2580	700	141,904 50			

NATASHQUAN SUBDIVISION (Watsheeshoo to Natashquan Point).

1	Watsheeshoo	1200	9		1250				300	240		80	889 50
2	Pashashchee				2880								720 00
3	Agwanus and Nabisippi		49			3300		600	300	1480	500	60	16,944 00
4	Mission Island		6			450				275	120	50	2,415 00
5	Natashquan	56000	7	25		5450		700	400	3500	900	500	39,077 50
Totals		57200	71	25	4130	9200		1300	1000	5495	1520	670	60,046 00

RETURN showing the Number, Tonnage and Value of Vessels, Boats, Nets, and the Kinds and Quantities of Fish, &c., in the County of Saguenay, Province of Quebec, for the Year 1903—Continued.

ROMAINE SUBDIVISION (Natashquan Point to Cacochaoo).

Number.	FISHING VESSELS AND BOATS.				FISHING GEAR OR MATERIALS.						KINDS OF FISH.						FISH PRODUCTS.			Total Value of All Fish.	Number.
	Vessels.		Boats.		Gill Nets.		Seines.		Trap Nets.		Salmon, salted, bbls.	Herring, salted, bbls.	Lobsters, preserved in cans, lbs.	Cod, dried, cwt.	Halibut, lbs.	Trout, lbs.	Fish oil, galls.	Fish as bait, bbls.	Seal skins, number.		
	Number.	Value.	Men.	Number.	Value.	Number.	Fathoms.	Value.	Number.	Value.											
Saguenay County.																					
1	Kegashka.	50	750	6	10	400	10	9	150	200	3	120	100	500	1000	310	100	20	2,918 00	1	
2	Washecootai.				2	30	2	8	400	350					1000	30	...	10	301 50	2	
3	Romaine.				15	300	13	12	600	400	2	80	60	200	500	211	250	37	2,119 55	3	
	Cacochaoo.				10	250	8	4	200	175	1	40	40	350	1000	250	4075	25	7,923 75	4	
	Totals	1	50	750	6	37	980	33	33	1650	1125	6	240	200	1050	1500	3000	801	13,262 80	92	

ST. AUGUSTIN SUBDIVISION (Cacochaoo to Chicatica).

1	Cacochaoo to Etamamu.				6	120	10	10	100	200	1	50	50							1
2	St. Mary's.				4	80	5	4	160	80										2
3	Harrington.				54	1080	110	40	2000	1000	10	350	300	6	2000					3
4	Little Meccatina.				10	200	20	4	160	80	2	75	50	5	2000					4
5	Whale Head.				30	600	40	20	1000	500	3	250	200	7	2800					5
6	Mutton Bay.				65	1300	120	30	1500	750	10	400	200	5	2000					6
7	Meccatina to La Tabatière.				30	600	50	15	750	375	8	350	300	10	4000					7
8	Great Meccatina Island.				20	400	40	10	500	250	3	500	500	1	1600					8
9	Pondlerica Pecteau to St. Augustin				15	300	27	30	1500	750	2	75	50	3	900					9
10	Point à Giroux to Chicatica.				10	200	10	6	300	150	3	100	75	2	800					10
	Totals				244	4880	432	169	8270	4135	42	2150	1725	42	16100	129	424	4950	22571	132,429 55

SESSIONAL PAPER No. 22

Return showing the Number, Tonnage and Value of Vessels, Boats, Nets, &c.—Province of Quebec—Continued.

County of Saguenay.

BONNE ESPERANCE SUBDIVISION—Chicatica to Blanes Sablons.

Number.	Fishing Vessels and Boats.				Fishing Gear or Materials.				Kinds of Fish and Fish Products.										Total Value of All Fish.	Number.						
	Vessels.		Boats.		Gill Nets.		Seines.		Trap Nets.		Value.	Salmon, salted, lbs.	Herring, salted, lbs.	Lobsters, preserved in cans, lbs.	Cod, dried, cwt.	Trout, lbs.	Coarse and mixed fish, lbs.	Fish oil, galls.			Fish as bait, lbs.	Seal skins, No.				
	Tonnage.	Value.	Men.	Number.	Value.	Men.	Number.	Value.	Number.	Value.																
Saguenay County.																										
1	Chicatica to Rock Bay	...	...	5	225	8	7	210	130	1	75	175	1	400	5	...	190	...	210	20	40	1,073	00	1	
2	Dog Island to Burnt Island	2	74	1800	10	28	43	225	175	3	185	300	15	2350	2	...	1275	1200	17	75	50	6,381	50	2		
3	Bonne Esperance	2	184	4500	20	62	95	18	1800	1500	4	875	875	16	5900	11	...	7000	...	22	100	...	32,954	00	3	
4	Pigeon Island and St. Paul's	1	40	700	5	14	21	10	400	275	2	150	160	5	2000	23	...	1000	...	...	60	...	5,085	00	4
5	Stick Point to Salmon Bay	...	...	...	2900	92	7	350	225	10	1795	2900	20	10000	12	...	4100	1200	...	100	...	19,515	00	5	
6	Little Fishery & Five League	...	...	...	600	18	4	200	125	3	195	375	3	1200	10	...	700	...	15	50	100	3,824	00	6	
7	Middle Bay & Belles Amours	2	104	2000	15	31	71	21	100	75	3	375	400	10	4100	7	...	3550	...	52	200	...	17,061	50	7	
8	Bradore Bay	4	309	7500	30	41	82	...	...	...	7	555	1125	23	9200	7	...	5550	600	67	500	280	27,665	50	8
9	Long Point	...	...	...	1040	52	...	...	...	...	1	50	75	10	4500	1	...	1200	...	...	250	160	6,371	00	9
10	Green Island	...	...	...	1600	75	...	...	...	...	4	420	1800	8	4000	2	...	4500	...	87	500	...	22,158	00	10
Totals		11	711	16500	80	317	557	52	3285	2505	40	4175	8185	101	43650	83	81	29065	3000	320	17255	1875	630	142,088	50	

ANTICOSTI ISLAND.

1 Fox Bay.	12	700	50	5	500	200	2	1000	500	3	1200	68000	20	5200	24,890 00	1
2 Baie Ste. Claire.	10	500	20	10	400	200	3	150	150	20	200	200	400	300	2,400 00	2
3 Strawberry Cove.	15	600	25	15	600	400	3	150	150	30	400	800	800	350	4,380 00	3
4 Shallop Creek.	2	50	2	3	300	300	...	...	...	8	...	60000	...	...	120 00	4
5 Gore Point	10	250	15	...	...	...	...	...	...	...	...	...	...	500	15,750 00	5
Totals.	49	2100	112	33	1800	1100	8	1300	800	3	1200	850	128000	1220	600 6350	47,540 00

RECAPITULATION.

Showing the Number, Tonnage and Value of Vessels and Boats and the Quantity and Value of all Fishing Materials and other Fixtures used in the Fishing Industry in the **Gulf Division, Province of Quebec**, for the Year 1903.

COUNTY OF BONAVENTURE.

Number.	Fishing Vessels and Boats.					Fishing Gear or Materials.									
	Vessels.			Boats.		Gill Nets.					Seines.				
	Number.	Tonnage.	Value.	Men.	Number.	Value.	Number.	Fathoms.	Value.	Number.	Fathoms.	Value.	Number.	Value.	Number.
1 Restigouche	...	...	...	...	23	480	60	18	1000	3750	...	...	...	...	...
2 Bonaventure	6	320	5400	36	1200	18750	2255	3216	62820	39750	132	3980	3490	...	...
3 Port Daniel	...	...	...	...	588	19380	899	1018	20520	15440	76	2285	2960	...	...
Totals	6	320	5400	36	1811	38610	3214	4282	87340	58940	208	6265	6450	...	...

COUNTY OF GASPE.

Number.	Fishing Vessels and Boats.					Fishing Gear or Materials.									
	Vessels.			Boats.		Gill Nets.					Seines.				
	Number.	Tonnage.	Value.	Men.	Number.	Value.	Men.	Number.	Fathoms.	Value.	Number.	Fathoms.	Value.	Number.	Value.
1 Grand River	...	...	...	...	570	31630	1527	1331	28965	15193	27	905	660	...	...
2 Gaspe Bay	...	...	...	...	1519	37060	1697	1373	34619	21435	66	2500	2222	...	...
3 Mont Louis	...	...	...	...	408	10750	586	868	25940	19400	7	230	210	...	...
4 Ste. Anne	...	...	...	...	131	1600	183	257	7880	6405	...	...	...	...	...
5 Magdalen Islands, S	2	25	500	9	391	22850	1000	2394	43190	9890	13	1875	4380	11	6875
6 " N	2	24	400	10	170	4385	453	878	20540	5470	...	...	...	18	13000
Totals	4	49	900	19	3189	108305	5446	7101	161134	77793	113	5510	7472	29	19875

SESSIONAL PAPER No. 22

COUNTY OF SAGUENAY.

1 Godbout	6	111	1190	15	211	4770	225	214	10225	9795	6	325	415	5	125	21	545
2 Moisie	4	118	2375	15	61	5250	138	91	4818	6365	9	220	528				
3 Mingan	5	191	2200	37	391	20580	813	41	5875	4700	47	2710	3315	15	160		
4 Natashquan	1	30	900	6	183	10190	234	140	5130	4060	17	930	956				
5 Romaine	1	50	750	6	37	980	33	33	1650	1125	6	240	200				
6 St. Augustin					244	4880	432	169	8270	4135	42	2150	1725				
7 Bonne Esperance	11	711	16500	80	317	14890	557	52	3285	2505	40	4175	8185	84	615		
8 Anticosti					49	2100	112	33	1800	1100	8	1300	800				
Totals	28	1211	23915	159	1496	63640	2554	776	41083	33785	175	12050	16124	101	900	21	545

GRAND TOTAL FOR GULF DIVISION.

1 Bonaventure County	6	320	5400	36	1811	38610	3214	4282	87340	58940	208	6265	6450	486	6968		1
2 Gaspé	4	49	900	19	3189	108305	5446	7101	161134	77793	113	5510	7472	320	6415	1	50
3 Saguenay	28	1211	23915	159	1496	63640	2554	776	41083	33785	175	12050	16124	101	900	21	545
Grand totals	38	1580	30215	214	6496	210555	11214	12159	289557	170518	496	23825	30046	920	14283	25	595

RECAPITULATION.
Showing the Number, Tonnage and Value of Vessels and Boats, &c., Gulf Division, Province of Quebec *Continued.*
COUNTY OF BONAVENTURE *Continued.*

Number.	FISHING GEAR, &c. <i>Con.</i>				LOBSTER PLANT.				OTHER FIXTURES USED IN FISHERIES.							
	Smelt Nets.		Hand Lines.		Canneries.		Traps.		Freezers and ice houses.		Smoke and fish houses.		Piers and Wharves.		Tugs, Steamers and Smacks.	
	Number.	Value.	Number.	Value.	Number.	Value.	Number.	Value.	Number.	Value.	Number.	Value.	Number.	Value.	Number.	Value.
		\$		%		%		%		%		%		%		%
1 Restigouche	30	1500	2890	1415	2	750	1000	750	16	3425	347	17360	2	9000		
2 Bonaventure			6535	2010	9	2800	9600	5800	226	1900	278	6970			1	250
3 Port Daniel																
Totals	30	1500	9425	3455	11	3550	10600	6550	242	5325	625	24330	2	9000	1	250

COUNTY OF GASPE *Continued.*

Number.	FISHING GEAR, &c. <i>Con.</i>				LOBSTER PLANT.				OTHER FIXTURES USED IN FISHERIES.							
	Smelt Nets.		Hand Lines.		Canneries.		Traps.		Freezers and ice houses.		Smoke and fish houses.		Piers and Wharves.		Tugs, Steamers and Smacks.	
	Number.	Value.	Number.	Value.	Number.	Value.	Number.	Value.	Number.	Value.	Number.	Value.	Number.	Value.	Number.	Value.
		\$		%		%		%		%		%		%		%
1 Grand River			3233	1409	11	6300	10800	6300	228	2110	136	58040	3	2300		
2 Gaspé Bay			3038	1519	4	1050	2550	1275	63	1300	91	69000	27	11100		
3 Mont Louis			1172	2290	1	800	2000	400		1000	18	8900	3	2600		
4 Ste. Anne			524	524												
5 Magdalen Islands, S.			2172	586	12	8600	29250	21250	420	950			11	17500	21	300
6 " N.			499	167	22	13250	21800	16300	525	1000	11	7000	16	28000	7	780
Totals			10638	6495	50	30000	66400	45525	1236	6360	256	142940	60	61500	9	1080

COUNTY OF SAGUENAY—Continued.

	1	50	364	187	1	400	150	75	5	31	1010	7	190	1	275	.....	1	2	3	4	5	6	7	8
1 Godbout	1																							
2 Moisie			256	128						1	500	5	2000	1	500	.....							
3 Mingan			1564	782	1	900	1800	900	37	2	600	34	24000	7	3750	.....							
4 Natashquan			960	480	5	1400	1500	1500	16	1	400	90	8260	27	1900	.....							
5 Romaine			110	55	3	400	600	300	22			6	250	3	180	.....							
6 St. Augustin			976	188	7	1700	3000	1500	45			120	5110	63	3240	.....							
7 Bonne-Espérance	182	8220	1922	536		2500	2200	1100	50	1	200	56	14600	84	14385	.....	1							5000
8 Anticosti			150	75	2							3	500	2	1600	.....							
Totals	183	8270	6302	2731	22	7300	9250	5375	175	36	2710	321	54910	188	25830	.....	1							5000

GRAND TOTAL FOR GULF DIVISION—Continued.

1 Bonaventure County..	30	1500	9125	3455	11	3550	10300	6550	242	51	3325	625	24330	2	9000	.....	1	250	1
2 Gaspe			10638	6495	50	30000	66460	45525	1236	53	6360	256	142940	60	61500	.....	9	1080	2
3 Saguenay	183	8270	6302	2731	22	7300	9250	5375	175	36	2710	321	54910	188	25830	.....	1	5000	3
Grands totals	213	9770	26365	12681	83	40850	86310	57450	1653	140	14395	1202	222180	250	90330	.....	11	6330	

RECAPITULATION.

Showing the Kinds and Quantities of Fish and Fish Products in the Gulf Division, Prov. of Quebec, for the Year 1903.—*Con.*
COUNTY OF BONAVENTURE *Continued.*

DIVISIONS.	KINDS OF FISH.														Number.
	Salmon, fresh, lbs.	Salmon, salted, brls.	Herring, salted, brls.	Herring, fresh, lbs.	Herring, smoked, lbs.	Mackerel, fresh, lbs.	Mackerel, salted, brls.	Lobsters, preserved in cans, lbs.	Lobsters, fresh in shell, cwt.	Cod, dried, cwt.	Cod, tongues and sounds, brls.	Haddock, fresh, lbs.	Haddock, dried, cwt.		
1 Restigouche	25000		50	15000					30					1	
2 Bonaventure	99200		2500	54000	12500			6000	60	9625	17	55500	385	2	
3 Port Daniel	31237		3010	7000	20000			54300		12400	51		1250	3	
Totals..	155437		5560	76000	62500			60300	90	22025	68	55500	1635		

COUNTY OF GASPÉ *Continued.*

	1	2	3	4	5	6
1 Grand River	35840	1262				695
2 Gaspé Bay	123000	1270				4800
3 Mont Louis	21350	4450	1000	600		750
4 St. Ann's	12620	3260	6700	2000		
5 Magdalen Islands		6585	30350			
6 "		6788		40000		125
Totals	192810	23615	38050	42600	1500	6370

COUNTY OF SAGUENAY—Continued.

1	Godbout.	173932	568	8500		2	1392	1151	3		1
2	Moisie	221580	75					2200	14		2
3	Mingan	64500	170				13800	25250	30		3
4	Natasbquan.	57200	25				4130	9200			4
5	Romaine.		30				600	1050			5
6	St. Augustin		424					24887			6
7	Bonne Esperance.		83					29065			7
8	Anticosti		8				128000	1220			8
Totals.		517242	369	1423	8500	2	147922	94026	47		

GRAND TOTAL FOR GULF DIVISION—Continued.

1	Bonaventure County	153437	5560	76600	62500		60300	22025	68	55500	1635	1
2	Gaspé.	192810	23615	38050	42600	1500	770212	103381	193		6370	2
3	Saguenay	517242	369	1423			147922	94026	47			3
Grand totals.		865489	369	30598	105100	1500	978434	219132	308	55500	8005	

RECAPITULATION.

Showing the Kinds and Quantities of Fish and Fish Products in the Gulf Division, Prov. of Quebec, for the Year 1903—*Concl'd.*
COUNTY OF BONAVENTURE—*Concluded.*

DIVISIONS.	KINDS OF FISH.										FISH PRODUCTS.			TOTAL VALUE OF ALL FISH.	Number.
	Hake, dried, cwt.	Halibut, lbs.	Trout, lbs.	Shad, brls.	Smelts, lbs.	Eels, brls.	Tom Cod or frost fish, lbs.	Coarse and mixed fish, brls.	Fish oil, galls.	Fish as bait, brls.	Fish as manure, brls.	Seal skins, number.			
1 Restigouche			12000		150000			40000				500	15,675 00	1	
2 Bonaventure	161	1900	50700	18	16500	89	24000			3210	3140	83000	135,992 75	2	
3 Port Daniel		10500	13500		25000		8500			8900	3950	10700	111,778 65	3	
Totals.	161	12400	76200	18	191500	89	72500			12110	7090	94200	263,446 40	25	

COUNTY OF GASPE—*Concluded.*

1 Grand River	165	9900				14000				20775	8800		205,704 25	1
2 Gaspé Bay						97000				32150	9350		277,065 00	2
3 Mont Louis		52900	1500							9150	4485	1020	107,129 50	3
4 St. Ann's		3705	1000							1412	325	200	31,495 10	4
5 Magdalen Islands S							100			4185	24410	1025	273,075 50	5
6 " N							15			1254	1610	890	191,550 95	6
Totals	165	66505	2500			111000	115			68926	48980	3135	1,088,020 30	167

SESSIONAL PAPER No. 22

COUNTY OF SAGUENAY—Concluded.

1 Godbout	17040	19800	7100	2400	135	58	513	48,666	15	1
2 Moisie	5644	1350		3411	355	102	320	57,399	70	2
3 Mingan	6750	6800		14675	2580		700	141,902	50	3
4 Natashquan	1300	1000		5495	1520		670	60,046	00	4
5 Romaine	1500	3000		801	1425		92	13,262	80	5
6 St. Augustin		4950		22571	4370		2219	132,429	55	6
7 Bonne-Espérance		3000		17255	1855	320	630	142,088	50	7
8 Anticosti				600	6350			47,540	00	8
Totals	32234	39900	7100	67208	21590	160	5144	643,335	20	

GRAND TOTAL FOR GULF DIVISION—Concluded.

1 Bonaventure County	161	12400	76200	18	191500	89	72500	12110	7090	94200	25	263,446	40	1
2 Gaspé	165	66505	2500		111000	115		68926	48980	3135	167	1,088,020	30	2
3 Saguenay		32234	39900		7100			67208	21590	160	5144	643,335	20	3
Grand totals	326	111139	118600	18	309600	204	72500	148244	77660	97495	5336	1,994,801	90	

RECAPITULATION

STATEMENT Showing Yield and Value of Fisheries of the Gulf Division, Province of Quebec, for the Season of 1903.

Description.	Quantity.	Price.		Value.	
		\$	cts.	\$	cts.
Salmon, fresh in ice.....	Lbs.	865,489	0 20	173,097	80
" salted.....	Brls.	369	15 00	5,535	00
Herring.....	"	30,598	4 50	137,691	00
" fresh.....	Lbs.	122,550	0 01	1,225	50
" smoked.....	"	105,100	0 02	2,102	00
Mackerel, fresh.....	"	1,500	0 12	180	00
" salted.....	Brls.	10,201	15 00	153,015	00
Lobsters, canned.....	Lbs.	978,434	0 25	244,608	50
" fresh in shell.....	Cwt.	108	5 00	540	00
Cod, dried.....	"	219,432	4 50	987,444	00
" tongues and sounds.....	Brls.	308	10 00	3,080	00
Haddock, fresh.....	Lbs.	55,500	0 03	1,665	00
" dried.....	Cwt.	8,005	3 00	24,015	00
Hake, dried.....	"	326	2 25	733	50
Halibut.....	Lbs.	111,139	0 10	11,113	90
TROUT.....	"	118,600	0 10	11,860	00
Shad, salted.....	Brls.	18	10 00	180	00
Smelts, fresh in ice.....	Lbs.	309,600	0 05	15,480	00
Eels, salted.....	Brls.	204	10 00	2,040	00
Tommy cod.....	Lbs.	72,500	0 03	2,175	00
Coarse and mixed fish.....	Brls.	320	2 00	640	00
Fish oil.....	Galls.	148,244	0 30	44,473	20
Fish as bait.....	Brls.	77,660	1 50	116,490	00
Fish as manure.....	"	97,495	0 50	48,747	50
Seal skins.....	No.	5,336	1 25	6,670	00
Total for 1903.....				1,994,801	90
" " 1902.....				1,818,905	25
Increase for 1903.....				175,896	65

SESSIONAL PAPER No. 22

RECAPITULATION

SHOWING Number of Men, Vessels and Boats and Value of Material employed in Gulf
Division Fisheries—Season of 1903.

Description.	Value.
	\$ cts.
38 vessels of 1,580 tons manned by 214 men	30,215 00
4,496 boats fished by 11,214 men	210,555 00
289,557 fathoms of gill net	170,518 00
496 seines of 23,825 fathoms	30,046 00
181 trap nets	83,325 00
920 trawls	14,283 00
25 weirs	595 00
213 smelt and seal nets	9,770 00
20,365 hand lines	12,681 00
83 lobster canneries employing 1,653 hands	40,850 00
84,210 lobster traps	57,450 00
140 freezers and ice houses	14,395 00
1,202 smoke and fish houses	222,180 00
256 piers and wharfs	96,330 00
11 smacks and tugs	6,330 00
Total value	999,523 00

RETURN of the Number of Fishermen, Tonnage and Value of Boats, Nets, &c., and
Lévis, Province of Quebec,

FISHING MATERIALS.												KINDS	
DISTRICTS.	Boats.			Gill Nets.			Brush or Eel Weirs.			Herring, salted, brls.	Herring, fresh, lbs.		
	Number.	Value.	Men.	Number.	Fathoms.	Value.	Number.	Value.	Salmon, lbs.			Shad, lbs.	
Number.	s			s			s						
1 Capreels and Little Meehins	13	166	20	20	400	271					350	50	
2 Grands Meehins.	14	160	14	14	396	242	1	50	2660		180		
3 Ste. Félicité.	33	283	33	22	384	242	1	50			125		
4 Grosses Roches and vicinity.	5	22	5	5	90	35	1	50			40	100	
5 Matane.							6	250	5000		363	130	
6 Rivière Blanche.	6	55	6	13	400	160					8	3400	
7 Sandy Bay	55	563	55	86	2829	858					109	1100	
8 Métis.	6	13	6	1	24	12	6	180	2400		6	9000	
9 Ste. Flavie.	11	13	11	14	250	319					12	20000	
10 Ste. Luce	2	16	2	12	72	144	7	350	335		12	5000	
11 Rimouski.	29	635	34	7	46	32	13	460	2800		42	6000	
12 Islet à Canuel	7	225	7	150	150	200	5	1100	6625		31	30000	
13 Bic and River Hâtée.	4	40	4	4	128	124	10	1150	2160		76	150000	
14 St. Simon and St. Fabien.							5	100				400	
15 Trois Pistoles.							3	408	220	425		10000	
16 Green Island.	37	299	55				31	1880	2920	22920	203	29600	
17 Cacouna.	8	50	8				7	400	1040	2055	107	28000	
18 R. du Loup and Notre Dame.	4	45	4				9	390	11000	11120		60000	
19 St. André.							4	835				2500	
20 Kamouraska.	1	7	2				3	1600	300	2100	11	520	
21 St. Denis.	1	3	1				7	40	100			500	
22 River Ouelle.	2	5	6				14	450	400	200	10	35000	
23 Ste. Anne Lapocatière.	1	5	1				10	350					
24 St. Roch.							6	100					
25 St. Jean Port Joli.							19	214					
26 L'Islet.							5	375					
27 Cap St. Ignace.				2	60	32	9	945					
28 Crane, Goose and Canoe Islands							5	220					
29 Montmagny.	2	10	2	3	70	34	11	300					
30 Berthier.	19	100	19	10	320	165	30	200					
31 St. Valier.	5	75	5				1	3000	200	6500			
32 St. Michel.	6	40	6				8	3200	80	4850			
33 Beaumont.	9	60	9				9	3850	100	10850			
34 St. Joseph de Lévis.	9	50	9				9	3650	200	3500			
35 St. Nicholas.	1	10	1				1	400	5	2000			
Totals.	290	2950	325	363	5619	2870	256	26967	41485	66520	1665	401300	
Values	s								8297	3991	6660	4013	

SESSIONAL PAPER No. 22

the Kinds of Fish caught in the District extending from Cape Chatte to Point for the Year 1903.

OF FISH AND FISH PRODUCTS.																TOTAL VALUE OF ALL FISH.	Number.		
Whitefish, lbs.	Trout, lbs.	Bass, lbs.	Pickerel, lbs.	Cod, dried, cwt.	Halibut, lbs.	Sturgeon, lbs.	Eels, lbs.	Herring, smoked, lbs.	Sardines, brls.	Fish oil, galls.	Mixed and coarse fish, lbs.	Fish as bait, brls.	Fish as manure, brls.	Seals, No.	Belugas, No.				
																\$		cts.	
				500	1275					126		20	10				3,600	80	1
				700	300			400		160		10	20				4,151	00	2
				200	1500			100		100		15	4				1,506	60	3
				10	25			75		12		2	2				212	60	4
				5	50			200		10		15	4				2,509	80	5
				35	100			800		3	4000	3	10				282	40	6
				3	173			500		6	4000	7					538	60	7
					2000				2								800	00	8
					700							20					348	00	9
						35			10		10000						297	00	10
	9600						4200	1100			8000		175				2,189	50	11
						4200		4200					220				2,195	00	12
										10				10			2,171	50	13
							5400										328	00	14
						260			12	10				10			326	60	15
						7850		6655	167	17	8400		245	4			4,853	90	16
						1800			54	35	10500		80	22			2,092	30	17
						550				30	4000			17			3,570	45	18
						500	1000	200	10	8	600			6			164	90	19
						600	200		2					10			301	70	20
						100	3000		10		1000						1,399	00	21
						100	3000		15	1800	1800					32	699	50	22
	6000					325	1000				2000						409	00	23
							2300			850	1600						800	00	24
	4000						6400				1600						156	00	25
							2400				1200						593	50	26
		100				7600	1550				2400			10			599	00	27
		4000					4550				600						251	00	28
						7000	1950				3200						569	00	29
						15000	8500				8000						1,490	00	30
1500			1000			8000	10000				5000						1,730	00	31
2150		1250	850			1400	60300				1800						4,341	50	32
1550		1000	600			2150	45000				1600						3,750	00	33
2850		1200	850			1200	113650				2000						7,527	50	34
500		100	800			100					2000						235	00	35
8550	19600	7650	4100	1453	6123	58770	274400	14230	282	3177	85300	92	770	89	32				
855	1960	765	246	5812	612	3526	16464	284	846	953	853	138	385	111	128		56,900	65	

4-5 EDWARD VII., A. 1905

RETURN of the Number of Fishermen, Value of Boats, Nets, &c., and the Kinds of Fish

FISHING MATERIAL.											
DISTRICTS.											
Number.	Boats.			Gill Nets.			Seines.			Hoop Nets.	
	Number.	Value.	Men.	Number.	Fathoms.	Value.	Number.	Fathoms.	Value.	Number.	Value.
North Shore St. Lawrence.											
1	Ottawa River and tributaries (Pontiac and Ottawa counties).....	105	900	145	105	2300	480	...	...	...	...
2	Lake Two Mountains.....	95	950	95	160	2200	450	10	300	220	5 30
3	L'Assomption and Terrebonne counties.....	90	900	98	10	200	50	20	600	450	20 100
4	Berthier and Joliette counties.....	50	500	50	20	400	100	10	300	150	500 1500
5	Maskinongé county.....	25	200	25	10	200	50	4	120	90	200 600
6	†St. Maurice, Champlain and Portneuf counties...	60	600	75	20	240	75	10	300	220	....
South Shore St. Lawrence.											
7	Lotbinière and Nicolet counties.....	60	450	65	30	600	90	25	500	250	30 150
8	Yamaska county and river.....	55	580	60	...	...	...	4	160	140	1200 600
9	Richelieu county.....	40	400	40	...	...	...	6	180	120	50 250
10	Verchères county.....	25	250	25	...	...	...	8	240	160	6 30
11	Chambly county.....	20	200	30	...	...	...	6	180	120	3 50
12	Laprairie county.....	8	80	16	4	60	10	4	120	80	...
13	Lake St. Louis and tributaries.....	85	850	95	...	...	...	10	300	220	...
14	Lake St. Francis tributaries.....	60	510	75	...	...	...	...	...	...	...
15	†River Richelieu (Lacolle to St. Denis).....	70	700	80	...	...	...	30	600	500	100 2000
16	Missisquoi Bay.....	14	200	30	...	...	...	14	1100	900	...
17	Lakes and streams (Eastern Townships).....	...	...	...	...	...	...	...	...	...	...
Totals.....		862	8270	1004	359	6200	1305	161	5000	3620	2114 5310
Total values		\$.....									

* With night lines and trolling. † Two eel-weirs, \$60,000. ‡ In No. 6.—Add 8,300 bushels of Tom

SESSIONAL PAPER No. 22

in the District extending from Quebec City to Pontiac, for the Year 1903.

KINDS OF FISH.													
Shad, lbs.	Whitefish, lbs.	Trout, lbs.	Bass, lbs.	Pickered, lbs.	Pike, lbs.	Maskinonge, lbs.	Sturgeon, lbs.	Eels, lbs.	Perch, lbs.	Bullheads, lbs.	Catfish, lbs.	Mixed and coarse fish, lbs.	TOTAL VALUE.
													cts.
	18500	70400	21600	33500	92700	9600	35300	8300	9700	7500	11600	210900	27,367 00 1
		4000	5200	6500	4400	300	7000	7000	5800	6000	6500	40300	4,121 00 2
60000		30000	3200	7400	4500	600	1200	4200	2100	4300	1100	20600	5,886 00 3
4100	500	3500	1200	3100	9500	700	1200	20500	10400	12200	2500	42100	5,072 00 4
		5000	1000	2300	5100	1000	1100	8200	6200	6400	3300	31700	3,060 00 5
50000	30000	5600	2500	3700	11800	500	3500	10200	12800	6600	6800	95600	‡ 11,434 00 6
10600	2500		2700	8800	7600	1200	7600	25900	6200	1500	3900	80400	6,904 00 7
	800		1900	9100	19700	700	2900	25100	11300	12900	1500	79600	6,580 00 8
1200	500		600	2000	5000	200	700	15000	5000	2000	1000	20000	2,382 00 9
	200		500	1500	4100	200	800	3300	4600	900	400	31000	1,568 00 10
	1000		200	1100	1000	150	5100	3100	4200	1500	200	5900	1,177 00 11
1000	100		700	1200	900	100	500	600	600	500	200	31300	1,084 00 12
2000			3500	7700	1800	700	8000	14000	11100	4100	3800	26500	4,050 00 13
			1500	1100	1600	500	16400	41200	600	1000	1200	9200	4,124 00 14
			4500	5000	34600	100	600	82900	67100			214800	15,251 00 15
				35200	4100				27200			20000	4,781 00 16
	8000	55400	7800	32900	1900	400		900	18300			34600	11,548 00 17
20900	35100	173900	58600	162100	210300	16950	91900	270400	203200	67400	44100	994500	
2290	3510	17390	5860	12968	10515	1695	5514	16224	10160	3370	1323	19890	116,389 00

cods 84,980.

4-5 EDWARD VII., A. 1905

NORTH SHORE of the St. Lawrence from Quebec to the Saguenay, including Lake St. John District—1903.

Fishing Materials and kinds of Fish.	County of Quebec.	Montmor-ency, & Isle d'Orleans.	Charlevoix & Isle aux Coudres	Lake St. John & Tributaries.	Total Quantity.	Total Value.
						\$ cts.
Boats, No.	4	8	12	15	39	500 00
Weirs, No.		127	53		180	11,600 00
Gill net, fathoms.	200		350	1,600	2,150	500 00
Seines, fathoms.		40	60		100	60 00
Lines, No.	25	30	40	40	135	110 00
Total value.						12,850 00
Kinds of Fish						
Salmon, lbs.	120	800	1,500	12,600	15,020	3,004 00
Herring, fresh, lbs.			5,000		5,000	50 00
Whitefish, lbs. ‡	2,100	300		18,000	20,400	2,040 00
Trout, lbs.	9,200	1,500	14,700	30,800	56,200	5,620 00
Ouananiche, lbs.				24,300	24,300	2,430 00
Pickarel, lbs.	800	300		77,600	78,700	4,722 00
Pike, lbs.				30,300	30,300	1,515 00
Eels, lbs.	500	274,600	59,800		334,900	20,094 00
Perch, lbs.	250	150		1,900	2,300	115 00
Coarse and mixed fish, lbs.	2,600	36,000	179,900	132,600	351,100	3,511 00
Sardines, brls.		50	150		200	600 00
Totals.	15,570	323,650	290,900	328,100	958,220	
Values.	1,270	17,352	7,657	17,422		43,701 00

*One steam tug \$250. ‡ Including Bar fish.

SESSIONAL PAPER No. 22

RETURN Showing Yield and Value of Fisheries of the Province of Quebec, exclusive of the Gulf Division), for the year 1903.

Description.	Quantity.	Price.		Value.
		\$	cts.	\$ cts.
Cod. Cwt.	1,433	4	00	5,812 00
Halibut. Lbs.	6,123	0	10	612 30
Salmon. Lbs.	56,505	0	20	11,301 00
Ouananiche. Lbs.	24,300	0	10	2,430 00
Trout Lbs.	249,700	0	10	24,970 00
Whitefish Lbs.	64,050	0	10	6,405 00
Herring, fresh. Lbs.	406,300	0	01	4,063 00
" smoked. Lbs.	14,230	0	02	284 60
" salted. Brls.	1,665	4	00	6,660 00
Sardines Brls.	482	3	00	1,446 00
Shad. Lbs.	69,420			6,981 20
Eels Lbs.	879,700	0	06	52,782 00
Maskinongé. Lbs.	16,950	0	10	1,695 00
Bass. Lbs.	66,250	0	10	6,625 00
Pickarel. Lbs.	244,900			17,936 00
Pike Lbs.	240,600	0	05	12,030 00
Perch Lbs.	205,500	0	05	10,275 00
Sturgeon. Lbs.	150,670	0	06	9,040 20
Tom Cod Bush.	8,300	0	60	4,980 00
Coarse and mixed fish. Lbs.	1,430,900			24,254 00
Bullheads dressed. Lbs.	67,400	0	05	3,370 00
Catfish. Lbs.	44,100	0	03	1,323 00
Fish as bait Brls.	92	1	50	138 00
" manure. Brls.	770	0	50	385 00
" oil. Galls.	3,177	0	30	953 10
Seals skins. No.	89	1	25	111 15
White Whale skins. No.	32	4	00	128 00
Total for 1903.				216,990 65
" 1902				240,269 94
Decrease.				23,278 29

STATEMENT showing the Fishing Materials in the above district exclusive of the (Gulf St. Lawrence), 1903.

Article.	Value.
	\$ cts.
1,191 Fishing boats (1,580 men) ..	11,720 00
812 Gill nets, 13,969 fathoms.	4,755 00
165 Seines, 5,000 fathoms.	3,680 00
436 Weirs (brush of wire) ..	38,507 00
2 Weirs, eel weirs special.	60,000 00
2,114 Hoop nets (verveux).	5,210 00
2,124 Fishing lines or night lines. ..	1,353 00
Total.	125,325 00

RECAPITULATION

Of the Yield and Value of the Fisheries of the whole Province of Quebec for the Year 1903.

Kinds of Fish.		Quantity.	Rate.	Value.	Total Value.
			\$ cts.	\$ cts.	\$ cts.
Salmon	Lbs.	921,994	0 20	184,398 80	
" salted	Brls.	369	15 00	5,535 00	
					189,933 80
Onananiche	Lbs.	24,300	0 10		2,430 00
Trout	"	368,300	0 10		36,830 00
Whitefish	"	64,050	0 10		6,405 00
Smelts	"	309,600	0 05		15,480 00
Cod (dried)	Cwt.	220,865	4 50	993,256 00	
" tongues and sounds	Brls.	308	10 00	3,080 00	996,336 00
Haddock (dried)	Cwt.	8,005	3 00	24,015 00	
" (fresh)	Lbs.	55,500	0 03	1,665 00	25,680 00
Hake (dried)	Cwt.	326	2 25		733 50
Halibut	Lbs.	117,262	0 10		11,726 20
Tom Cod	"	321,500			7,155 00
Herring (fresh)	"	528,850	0 01	5,288 50	
" (smoked)	"	119,330	0 02	2 386 60	
" (salted)	"	32,263	4 50	144,351 00	152,026 10
Sardines	Brls.	482	3 00		1,446 00
Shad	Lbs.	73,020			7,161 20
Mackerel (fresh)	"	1,500	0 12	180 00	
" (salted)	Brls.	10,201	15 00	153,015 00	153,195 00
Bass	Lbs.	66,250	0 10		6,625 00
Pickarel	"	244,900			17,936 00
Perch	"	205,500	0 05		10,275 00
Pike	"	240,600	0 05		12,030 00
Maskinongé	"	16,950	0 10		1,695 00
Eels	"	879,700	0 06	52,782 00	
"	Brls.	204	10 00	2,040 00	54,822 00
Sturgeon	Lbs.	150,670	0 06		9,040 20
Lobsters (canned)	"	978,434	0 25	244,608 50	
" (fresh in shell)	"	108	5 00	540 00	245,148 50
Bullheads (dressed)	"	67,400	0 05		3,370 00
Catfish	"	44,100	0 03		1,323 00
Coarse and Mixed Fish	"	1,494,900			24,894 00
Fish Oil	Galls.	151,421	0 30		45,426 30
Fish as bait	Brls.	77,752	1 50		116,628 00
" as manure	"	98,265	0 50		49,132 50
Seals	No.	5,425	1 25		6,781 25
White Whales (Belugas)	"	32	4 00		128 00
Total for 1903					2,211,792 50
" 1902					2,059,175 15
Increase					152,617 35

SESSIONAL PAPER No. 22

RECAPITULATION.

OF the number of Fishing Crafts, Nets, &c. in the whole Province of Quebec,
for the year 1903.

Articles.	Value.	Total.
	\$ cts.	\$ cts.
38 Fishing vessels (1,580 tons).....	32,215 00	
7,687 " boats.....	222,275 00	252,490 00
303,526 fathoms of gill-nets.....	175,273 00	
28,825 " seines.....	33,726 00	
461 weirs (brush or wire).....	39,102 00	
2 special eel weirs.....	60,000 00	
2,114 hoop-nets (verveux).....	5,310 00	
181 trap-nets.....	83,325 00	
213 smelt and seal-nets.....	9,770 00	
920 trawls.....	14,283 00	
28,488 hand lines and night lines.....	14,034 00	434,823 00
83 lobster canneries.....	40,850 00	
86,310 " traps.....	57,450 00	98,300 00
140 freezers and ice houses.....	14,395 00	
1,202 smoke and fish houses.....	222,180 00	
250 piers and wharfs.....	96,330 00	
11 smacks and tugs.....	6,330 00	339,235 00
Total.....		1,124,848 00

STATEMENT of Persons engaged in the Quebec Fisheries in 1903.

Number of men in fishing vessels.....	214
" " " boats.....	14,661
" " " lobster canneries.....	1,653
Total.....	16,528

APPENDIX No. 7.

ONTARIO.

GENERAL REMARKS, SEASON 1903.

The returns indicate a small diminution in the catch as compared with that of 1902. The demand for fish has, however, been active, and the prices exceptionally high; so that the estimated value of the catch is considerably greater than that of last year. In Lake Superior, Huron and the Georgian bay the falling off is again attributed to the rough weather, which prevailed throughout the greater part of the season, and not to a scarcity of fish, for when the weather permitted the catches are said to have been unusually large. In Lake Erie the gradual shrinkage from year to year may it is believed, be directly chargeable to the greed of American fishermen, and to the practically unlimited privileges which they have been allowed. They have operated with every kind of implement, and virtually, without restraint. This is assumed to be the principal reason why the stringent restrictions which have been so long maintained by Ontario have not been more effective in increasing the yield on this side of the lake; and unless a disposition is manifested on the part of the American authorities to take immediate action in the direction of effective preservative regulations and safe-guards, no tangible or defensible argument can be adduced against the claim of our fishermen to equally participate in the extermination.

A diminished catch in a number of places has no doubt resulted from the fact that many of the fishermen, finding other employment more remunerative, abandoned their fishing operations for a portion of the year, or did not pursue them with the assiduity they perhaps would otherwise have done.

The cause of a shortage in a certain portion of a lake in one season as compared with another sometimes arises from the fact that, owing to rough weather, the fishermen may not be able to lift their nets for several days. The fish decompose and pollute the water, and the effect is noticeable for the remainder of the season. Our own fishermen have suffered considerably in that respect, but not to the same extent it is believed that the United States fishermen have done. We gather from a report of one of the states bordering on Lake Erie, that fifty miles of net are claimed to have been lost this year by fishermen from one port alone. The number of fish caught by these derelict nets, not to speak of the effect of the decomposed fish upon the fisheries, must be considerable.

The improvident custom of setting gill nets late in the fall and during the winter months is believed to have a disastrous effect upon the fisheries, as well as to result in great pecuniary loss to the fishermen from the sweeping away of their nets during that usually stormy period.

In Lake Ontario it is reported that the species of fish known as ciscoe, which was caught years ago in such large numbers, 'is coming back again,' and that out of 6,000 fish taken in two or three lifts by Bronte fishermen, 90 per cent were ciscoes. This gladdened the hearts of the old fishermen, who prophesy that they will be as numerous as in former years. It is hoped their expectations may be realized. There is no finer flavoured fish in the market than the ciscoe.

NOTE. The information re-Ontario fisheries is taken from the provincial reports.

SESSIONAL PAPER No. 22

Several sea salmon are reported to have been taken in the St. Lawrence. Some doubt, however, has been expressed as to whether these fish were of the species known as *salmo salar*; but, from the descriptions given there is every reason to believe that they were.

Reports have from time to time reached the department that a fish said to be the grayling is to be found in Northern Ontario; but these reports have never been verified. Richardson, in 'Fauna Boreali-Americana' states that it abounds in the rocky streams that flow through the primitive country lying north of the 62nd parallel of latitude, but he does not record that he found it further south. It is said to still inhabit the waters of both the southern and northern peninsulas of Michigan, and that it was formerly very abundant in the Au Sable and Jordan rivers of Northern Michigan, though now practically exterminated by the lumbering operations carried on in that region. It would certainly be a delightful bit of information to find that this fish really was to be found in Ontario waters. Its dorsal fin is so unlike that of any other fish that any one will be able to decide the matter without difficulty. Its colouring is described by Jordan and Evermann to be as follows: 'His pectorals are olive-brown, with a bluish tint at the end; the ventrals are striped with alternate streaks of brown and pink; the anal is plain brown; the caudal is very forked and plain; while the crowning glory is the immense dorsal, which is dotted with large, brilliant-red or bluish-purple spots, surrounded with a splendid emerald green, which fades after death—the changeable shade of green seen in the peacock's tail.' There is said to be no species sought for by anglers which surpasses the grayling in beauty or gameness.

The statistics which are to be found in another portion of the report have been prepared with the utmost care, and are believed to furnish an accurate account of the season's operations. The usual difficulty has been experienced in impressing the fishermen with the necessity of making their returns promptly, and this has made it absolutely impossible to complete the report as early as otherwise might have been done.

Licenses to fish with 2,002,710 fathoms of gill net, 488 pound nets, 523 hoop nets, 100 seines, 32 dip nets, and three machines, besides several thousand hooks, were issued.

The occupation has given employment to 2,443 men, and 24 gasoline boats, 109 tugs, and 1,370 other boats have been in use.

An estimated capital of \$846,368 is invested in the industry.

The aggregate catch amounts to 21,194,205 pounds, as compared with 23,714,570 in 1902, a decrease of 2,520,365.

The estimated value of the catch is \$1,535,144.

GREAT LAKE FISHERIES.

The maintenance and preservation of our great lake or commercial fisheries are perhaps of greater importance than that of conserving those commonly known as the sporting fisheries. This must be done, mainly, by propagation and protection; propagation by preventing the taking of immature fish, that the greatest possible opportunity may be afforded for natural reproduction, and by largely increasing the output of fish hatcheries; and protection, by exercising a vigorous policy of supervision, the requirement of a strict compliance with the laws and regulations, and the prompt prosecution and punishment of persons for violating the same.

Fish are described by naturalists as being of two classes, local and migratory. Both may be quickly exhausted by improper fishing and overfishing with regard to the species which lead a more or less migratory existence, there cannot be the least doubt and where man has complete control over the area occupied by each, the same principle of more fish being caught than produced would lead to exhaustion likewise. It has been demonstrated that some of the Atlantic fish coming into the Mediterranean to spawn, and caught before or after spawning, have become extinct although at one time so numerous as to interfere with navigation at the spawning season.

The diminution of any species of fish can usually be traced to the action of man.

In the great lakes fishing is carried on with gill-nets in almost any depth, even in 400, 500 and 600 feet of water with as great safety and less loss of nets than when used

4-5 EDWARD VII., A. 1905

nearer the shore and shallows. It is in the deep water in the summer months that the immature fish or summer trout are now largely destroyed by the use of smaller mesh nets, which have been reduced from the former 5-inch extension size to $4\frac{1}{2}$ and 4 inches, and less.

The fish can be followed to almost any point in the lakes and with this irregular fishing and over-fishing their extermination is only a matter of time.

When any species of fish gets much below nature's balance in the waters by such abnormal means, their natural enemies and parasites are usually sufficient to complete their destruction without the aid of man.

The Dominion has the power to enact fishery regulations and restrictions, to prescribe the times of the year during which fishing may be allowed, and to stipulate the implements which may be employed for the purpose. The province may, among other things, issue or withhold licenses; it may authorize or refuse the use of certain implements of capture which may appear to it undesirable, though such implements have not already been prohibited by federal action; it may grant a license for one month or longer, as it may consider proper, subject, of course, to the season of prohibition established by the federal government; it may cancel a license before the period for which it has been issued has expired; it may refuse a license for any locality, or for any authorized implement of capture, should it consider that fishing under such license would be a detriment to the fisheries, or to the industry as engaged in by another class of fishermen with other implements of capture; it may insert in its license a condition that fish under a certain size shall be returned to the water; and it may prohibit the sale of fish for a longer or shorter period. It is recognized that the fishermen are each year going behind, that the yield of our great lakes fisheries is annually becoming less, that we cannot shut our eyes to the fact that this is the consequent result of the excessive fishing which has been carried on for the last half century, and which if continued must result in their complete annihilation, and that the time has come when the question cannot longer be ignored. It has resolved itself into this: There must be immediate intervention on the part of the two great countries which these waters unite, whose sacred duty it is to devise means, and to take steps which will prevent such a calamity—steps which will insure to our children's children their rightful heritage; steps which, while having these objects mainly in view, must not stifle, but encourage and develop an industry by which is supplied one of our most wholesome and nutritious of foods.

FISHWAYS.

Though the general question of the requirement of fishways in dams is, as the law at present stands, one for the consideration of the Dominion Department, instructions have been given by the commissioner for the erection of fishways in two dams, the property of the province, in which it was made clear that their erection was desirable and proper. The principle fact which has to be borne in mind, or ascertained, when these recommendations are made, is that a roadway will not be provided for the entrance of worthless fish into waters in which under existing conditions only choice varieties are to be found, if but in small numbers. Should such a result be likely to follow, it would be better to transplant a few pairs of parent fish from adjacent waters, which, with proper protection, would soon populate those above the dam.

SESSIONAL PAPER No. 22

POLLUTION FROM SAWDUST AND OTHER CAUSES.

Referring to the injurious effects of sawdust on fish life, as to which conflicting opinions are expressed by fish culturists, a writer in a recent number of *Forest and Stream* points out that one of the first difficulties which fish culturists had to overcome in the artificial propagation of trout was the deleterious effects of the fungus growth that always appeared in the troughs and boxes in which the eggs were hatched, especially where these were manufactured out of new lumber; and he makes the emphatic statement that this fungus is so deadly to the eggs that if a million were to be put into green lumber troughs, not a single egg would mature. He very pertinently remarks that if the exposed surface of a hatching trough could be the primary means of such deadly consequences, what a vaster power for injury there must be in sawdust, in which form the exposed surfaces of the wood are multiplied almost indefinitely. If his contentions are well founded, the effect of throwing tons of sawdust every year upon the spawning beds, or where it will float and lodge upon the spawning beds below, must be most disastrous. In his opinion it is this fungus alone that destroys the young fish that are exposed to it, and not that mortality occurs by the sawdust becoming fixed in the gills during inhalation, as is generally supposed. Whatever ground there may be for a difference of opinion on the subject, it is well known that fish will abandon waters, the beds of which have become covered with this refuse. The practice of lumbermen of permitting sawdust to enter the water as the most convenient and inexpensive means of getting rid of it, is in some places still persisted in, notwithstanding the very severe penalties provided for the offence. Repeated warnings have been given, and preparations in a number of cases for making other disposition of the refuse, are, we are glad to find, under way.

A number of complaints have been received during the year as to the pollution of waters by the refuse from sugar factories. The attention of the parties has been called to the subject, and a system of settling basins and filters, which it is hoped will sufficiently eliminate the deleterious matter to render it perfectly harmless, has been recommended.

SESSIONAL PAPER No. 22

ARIO.

Fishing Materials and the Kinds of fish caught in the Province of Ontario, for 1903.

KINDS OF FISH.												
Herring, fresh, lbs.	Whitefish, lbs.	Trout, lbs.	Trout, salted, lbs.	Pickered or dore, lbs.	Pike, lbs.	Sturgeon, lbs.	Tullibee, lbs.	Catfish, lbs.	Mixed and coarse fish, lbs.	Caviare, lbs.	Value.	Number.
											\$	cts.
.....	148140	20780	.....	87100	44900	31000	5200	165500	.....	1180	44,138 00	1
.....	101400	.....	.....	22200	14050	.....	.....	.....	.....	.....	12,922 00	2
.....	2000	10000	.....	.....	.....	.....	.....	.....	.....	.....	1,200 00	3
.....	4000	.....	.....	20000	10000	.....	8000	.....	.....	.....	3,280 00	4
.....	8000	200	.....	.....	.....	.....	.....	.....	.....	.....	1,000 00	5
.....	1000	2600	.....	.....	.....	.....	.....	.....	.....	.....	360 00	6
.....	10400	3700	.....	5460	4050	.....	.....	.....	.....	.....	2,112 00	7
.....	4000	6000	.....	.....	1000	.....	.....	.....	.....	.....	1,040 00	8
.....	50000	50000	.....	.....	5000	.....	.....	.....	.....	.....	10,200 00	9
.....	2000	.....	.....	.....	200	50	.....	.....	.....	.....	212 00	10
.....	330940	95080	.....	134700	79200	31050	13200	165500	.....	1180	.....	.....
.....	33094	9508	.....	13470	3168	2484	792	13240	.....	708	76,464 00	.....
.....	29500	294200	892800	193	46850	3050	2850	.....	4200	.....	126,329 00	1
.....	13500	19200	.....	.....	.....	.....	.....	.....	.....	.....	3,270 00	2
.....	.....	3700	.....	.....	.....	.....	.....	.....	.....	.....	370 00	3
.....	.....	13700	.....	.....	.....	.....	.....	.....	.....	.....	1,370 00	4
.....	14000	20200	.....	.....	.....	.....	.....	.....	.....	.....	3,420 00	5
.....	9260	76000	.....	.....	.....	.....	.....	.....	.....	.....	8,526 00	6
.....	49700	24100	.....	.....	.....	.....	.....	.....	.....	.....	7,380 00	7
.....	18000	22000	.....	250	100	.....	.....	.....	.....	.....	4,029 00	8
.....	.....	8400	.....	.....	.....	.....	.....	.....	.....	.....	840 00	8
.....	149790	559400	400	3700	300	900	.....	.....	.....	.....	75,373 00	10
.....	1000	500	.....	.....	.....	.....	.....	.....	.....	.....	150 00	11
.....	14500	1600	.....	2600	200	250	.....	.....	.....	.....	1,898 00	12
.....	29500	563950	1641600	593	47400	3650	4000	.....	4200	.....	.....	.....
81,180	56,395	164,160	5,930	1,740	146	320	.....	.....	84	.....	232,955 00	.....

RETURN showing the Number, Tonnage and Value of Tugs, Vessels and Boats, and the

Number.		FISHING MATERIAL.														
		Tugs or Vessels.				Boats.			Gill Nets.			Seines.			Pound Nets	
		DISTRICTS.														
		Number.	Tonnage.	Value.	Men.	Number.	Value.	Men.	Number.	Yards.	Value.	Number.	Yards.	Value.	Number.	Value.
				\$			\$				\$			\$		\$
1	River St. Clair.....					13	390	33				12	1140	783		
2	Thames River					18	319	64*				18	860	550		
3	Lake St. Clair and Detroit River	3	13	1700	5	85	2495	161				27	3180	2400	8	2025
Totals.....		3	13	1700	5	116	3204	258	732			57	5180	3733	8	2025
Values		\$														
Lake Erie.																
1	Pelee Island	4	90	12900	40	13	960	25		22600	3300	1	132	40	20	6300
2	County Essex.....	2	50	9400	7	49	5000	64		4700	410	3	150	100	62	23400
3	" Kent.....	1	50	12000	10	67	8000	101				4	1200	250	93	30800
4	" Elgin	7	50	15550	13	52	6690	111		60040	5420				79	21800
5	Houghton and Long Point.	4	41	13000	14	25	845	41		81600	5995	6	2300	625	9	2950
6	Rowan Bay.....					8	250	28				7	2800	870		
7	Normandale					30	2455	70		15260	734	10	3880	1375		
8	East of Port Dover.....	3	18	4475	14	13	1022	22		31200	1483				17	4250
9	Cayuga to and including Grand River.	4	66	15500	25	10	255	15		4600	8000	5	355	210	5	1300
10	Port Maitland to Port Colborne ..	3	44	5900	13	17	595	30		16700	895				16	2800
11	Port Colborne to Niagara Falls ..					27	1185	31		16400	1475				4	120
Totals		28	409	88725	136	314	27347	538		253100	27712	36	10817	3470	305	93720
Values		\$														

* 52 dip-nets \$91.

SESSIONAL PAPER No. 22

Quantity and Value of all Fish, &c., in the Province of Ontario—(Continued.)

KINDS OF FISH.													
Herring, fresh, lbs.	Whitefish, lbs.	Trout, lbs.	Bass, lbs.	Pickered or Dore, lbs.	Pike, lbs.	Sturgeon, lbs.	Eels, lbs.	Perch, lbs.	Tullibee, lbs.	Catfish, lbs.	Mixed and coarse fish, lbs.	Caviare, lbs.	Sturgeon bladders, No.
VALUE.													
Number.													
3200				138350	2100	1300		2700			89900		
				33470	2025					1225	77400		
650	17750			56050	19650	41600	100	41300		32450	409700	2270	
3850	17750			227870	23775	42900	100	44000		33675	577000	2270	
154	1775			22787	951	3432	6	1320		2694	11540	1362	
154150	24050			8900	27175	4600		13900		9175	37400	320	
93500	41700			96730	256150	13600		87100		7900	152600	1020	
411250	22800	1400		320770	481200	10000		82600		1100	62350	470	50
416650	39050			345150	13550	11650		34000		7050	52450	450	
153000	27550	60	600	54510	2950	650		29900		10450	117400	225	
450			2150	14250	2850			15000	2500	5100	62750		
14750	250		1750	28250	5550			53900	50	750	144950		
236825	42800	1140	150	126900	700	17200		25000		100	20850	500	100
171000	77300	100		42950		18450		35100		50	50300	300	20
71200	27550	1570		65850	26050	27900		38200		200	61500	1370	
2650	230			14120	48450	30800		3500		250	21500	2060	390
1725425	303280	2870	6050	1118380	864625	134850		418200	2550	42125	784050	6715	560
69017	30328	287	484	111838	34585	10788		12546	153	3370	15681	4029	448

SESSIONAL PAPER No. 22

Quantity and Value of all Fish, Nets, &c., in the Province of Ontario—Continued

KINDS OF FISH.													VALUE.	Number.
Herring, fresh, lbs.	Whitefish, lbs.	Trout, lbs.	Pickereel or Doreé, lbs.	Pike, lbs.	Sturgeon, lbs.	Eels, lbs.	Perch, lbs.	Tullibee, lbs.	Catfish, lbs.	Mixed and coarse fish, lbs.	Caviare, lbs.	Sturgeon bladders, No.		
100			2800		1500		5000			2000			594	1
132000	5030		26810				4200						8,590	2
216900	60	20	7350	200			5600		100	6200			9,727	3
22200			650	550			2000		1000	350			1,122	4
39100							6200						1,750	5
85000	2000	13200											4,920	6
142600	19500	2600	200	7500			8700		3000	11600			8,967	7
148500		4000								20000			6,740	8
6000	3000	5500		300		700	500		400	2350			1,238	9
112000	6750	3300	100	200			1700		2000	9200			5,898	10
16800	2200	540		400			300						971	11
96100	4800	9800	200	30000			5900		10500	31700			8,175	12
				1500		1150	9900		54600	23250			5,259	13
55200	6440	24700	12200	114800	4300		137300		65100	168050			24,166	14
10000	20000		8000	140000	1000	30000	90000		55000	95000			19,680	15
				10500			29300		58400	11350		2	6,218	16
4900	22750	4100	1200	25950	2700		28000		7550	4650			5,832	17
	4450	3500	2000	13600	2000	6000	25500	6500	28500	13400			5,762	18
1087400	96980	71260	61510	345500	11500	37850	360100	6500	286150	399100		2		
43496	9698	7126	6151	13820	920	2271	10803	390	22892	7982		20	125,609	
825	10	300	170	61350			18400		84750	37350			11,058	1
2750				8800			7200		60950	7200			5,698	2
	50		4070	7775	1500		1000		17825	21400			2,727	3
	200	150	800	6150	25		200		1975	1300			553	4
15950	20600		18010	15350	191250					22600	13720	150	29,237	5
750	320	390	1340							6100			357	6
25275	21180	840	24390	99425	192775		26800		165500	95950	13720	150		
1011	2118	84	2439	3977	15422		804		13240	1919	8232	120	49,630	

RECAPITULATION of the Number of Fishermen, Tonnage and Value of Tugs,

Number.	Districts.	FISHING MATERIAL.								
		Tugs or Vessels.			Boats.			Gill Nets.		
		No.	Ton- nage.	Value.	Men.	No.	Value.	Men.	No.	Yards. Value.
1	Lake of the Woods and Rainy River District....	4	100	8,000	10	30	2,825	79		45,700 6,260
2	Lake Superior.	15	120	29,800	84	68	6,015	134		347,050 24,490
3	Lake Huron (N. channel)...	21	426	60,300	118	117	13,345	267		913,300 70,170
4	Georgian Bay.....	19	439	46,800	154	121	14,366	189		1,688,200 49,527
5	Lake Huron (proper).....	9	226	30,000	22	80	7,155	155		371,931 30,934
6	Lake and River St. Clair and Thames River.....	3	13	1,700	5	110	3,204	258	32	253,100 891
7	Lake Erie and Grand River.	28	409	88,725	136	314	27,347	538		362,705 27,712
8	Lake Ontario ...	6	45	17,550	19	271	17,724	457		5,194 18,289
9	Frontenac County.....					109	1,270	170		510 844
10	Leeds and Lanark County...					39	387	65		600 54
11	Prescott, Russell and Carleton Counties.....	1	10	300	1	29	883	35		1,050 120
12	Renfrew County.....					53	326	58		1,580 195
13	Nipissing District.....	3	10	3,100	11	21	1,000	35		14,500 900
14	Muskoka District.....					2	31	3		600
	Totals	109	1,798	286,275	560	1370	95,878	2,443		4,005,420 229,495

§ Dip nets.

RECAPITULATION of the Number of Fishermen, tonnage and Value of Tugs,

Number.	District.							
		Herring, salted.	Herring, fresh.	Whitefish.	Trout.	White Bass.	Pickarel or Dore.	Maskinonge.
		Brls.	Lbs.	Lbs.	Lbs.	Lbs.	Lbs.	Lbs.
1	Lake of the Woods and Rainy River District....			330,940	95,080		134,700	79,200
2	Lake Superior.....		29,500	563,950	1,641,600		47,400	3,650
3	Lake Huron (N. channel).	1,640	15,000	811,980	1,713,660		648,150	69,550
4	Georgian Bay.....	212	78,975	467,080	1,213,190		101,220	50,200
5	Lake Huron (proper).....	1,381	122,725	19,630	1,048,810		240,920	3,400
6	Lake and River St. Clair and Thames River.....		3,850	17,750			227,870	23,775
7	Lake Erie and Grand River		1,725,425	303,280	2,870	6,050	1,118,380	864,625
8	Lake Ontario.....	5	1,087,400	96,980	71,260		61,510	345,500
9	Frontenac County.....	30	5,825	10	300		170	61,350
10	Leeds and Lanark County.		2,750					8,800
11	Prescott, Russell and Carleton Counties...			50			4,070	7,775
12	Renfrew County.....			200	150		800	6,150
13	Nipissing District.....		15,950	20,600			18,010	15,350
14	Muskoka District.....		750	320	390		1,340	
	Totals.....	3,268	3,088,150	2,632,770	5,787,310	6,050	2,604,540	1,539,325
	Values.....	\$26,148	123,526	263,277	578,731	484	260,454	61,573

SESSIONAL PAPER No. 22

FISHERIES—Continued.

Vessels and Boats, Fishing Material, &c., for 1903.

FISHING MATERIAL.									OTHER FIXTURES USED IN FISHING.				
Seines.			Pound Nets.		Hoop Nets.		Night Lines.		Freezers and Ice Houses.		Piers and Wharfs.		Number.
No.	Yards.	Value.	No.	Value.	No.	Value.	No. hooks.	Value.	No.	Value.	No.	Value.	
		\$		\$		\$		\$		\$		\$	
			12	2,500	21	1,575			3	2,000	1	500	
			28	6,800					18	14,350			
			50	9,600					8	1,550			
									16	4,950	5	1,200	
			73	14,500					22	4,735			
57	5,180	3,733	8	2,025	95	5,700	6,600	176	30	3,540	3	475	
36	10,817	3,470	305	93,720	6	355	8,700	61	143	40,440			
6	1,050	435	117	*117	247	3,987	100	50	43	4,115	13	275	
					68	1,477			1	2,500			
1	12	20			68	1,325			6	214	1	25	
					18	330	1,800	69	15	235			
			12	3,100					2	2,400			
100	17,059	7,658	488	132,245	523	14,749	17,200	356	307	81,029	10	2,200	

* Spears. † Machine-traps.

Vessels and Boats, Fishing Material, &c., for 1903.—Continued.

Sturgeon.	Eels.	Perch.	Tullibee.	Catfish.	Mixed and Coarse Fish.	Caviare.	Sturgeon bladders.	Trout, salted.	Whitefish, salted.	Value.	Number.
Lbs.	Lbs.	Lbs.	Lbs.	Lbs.	Lbs.	Lbs.	No.	Brls.	Brls.	\$	
31,050			13,200	165,500		1,180				76,464	1
4,000					4,200			593		232,955	2
27,450				4,500	12,450	815		1,689	103	355,095	3
23,200		10,000		3,050	45,850	4,935		520	65	197,140	4
26,525		9,600		1,250	68,400	915		718	4	158,676	5
42,900	100	44,000		33,675	577,000	2,270				46,021	6
288,850		418,200	2,550	42,125	784,050	6,715	560			305,874	7
11,500	37,850	360,100	6,500	286,150	399,100			2		125,609	8
		18,400		84,750	37,350					11,058	9
		7,200		60,950	7,200					5,698	10
1,500		1,000		17,825	21,400					2,727	11
25		200		1,975	1,300					553	12
191,250					22,600	13,720	150	2		29,237	13
					6,100					357	14
648,250	37,950	868,700	22,250	701,750	1,987,000	30,550	710	3,524	172		
\$51,860	2,277	26,061	1,335	56,140	39,740	18,330	568	35,240	1,720	1,547,464	

STATEMENT of the yield and the value of the Fisheries of the Province for the year 1903.

Kind of Fish.	Quantity.	Price.		Value.
		\$	cts.	\$
Whitefish	brls. 172	10	00	1,720
"	lbs. 2,632,770	0	10	263,277
Trout	brls. 3,524	10	00	35,240
"	lbs. 5,787,310	0	10	578,731
Herring	brls. 3,268	8	00	26,148
"	lbs. 3,088,150	0	04	123,526
Bass (white)	" 6,050	0	08	484
Pickarel	" 2,604,540	0	10	260,454
Pike	" 1,539,325	0	04	61,573
Sturgeon	" 494,250	0	08	39,540
" Caviare	" 30,550	0	60	18,330
" Bladders	No. 710	0	80	568
Eels	lbs. 37,950	0	06	2,277
Perch	" 868,700	0	03	26,061
Catfish	" 701,750	0	08	56,140
Coarse fish	" 1,987,000	0	02	39,740
Tullibee	" 22,250	0	06	1,335
Total				1,535,144

RECAPITULATION.

Of fishing tugs, boats, nets, &c., employed in the Province for the year 1903.

Articles.	Value.
	\$
109 tugs, 1,798 tonnage, (560 men)	286,275
1,370 boats, (2,443 men)	95,878
4,005,420 yards of gill nets	225,495
100 seines, 17,059 yards	7,658
488 pound nets	132,245
523 hoop-nets	14,749
32 dip-nets	91
17,200 hooks and set lines	356
207 freezers and ice houses	81,029
10 piers and wharfs	2,090
3 machine-trap	275
117 spears	117
Total	846,368

SESSIONAL PAPER No. 22

APPENDIX No. 8.

MANITOBA.

ANNUAL REPORT ON THE FISHERIES OF MANITOBA, FOR THE
SEASON OF 1903, BY INSPECTOR WM. S. YOUNG.

SELKIRK, MAN., March 1, 1904.

To the Dominion Commissioner of Fisheries,
Ottawa.

SIR,—I have the honour to submit herewith my fourth annual report of the fisheries in this district, including statistics showing the number of men employed, the number of boats, nets, &c., their value, the varieties and quantities of fish caught. The sub-divisions of my district are the same as made in my last report and were as follows: Lake Winnipeg and tributaries, comprising the principal waterways, as Nelson river, Playgreen lake at the north; Winnipeg river and its expansions flowing from the east, and also the Red river. Lake Winnepegosis, including Lakes Dauphin and Waterhen. Lake Manitoba with Shoal lake a few miles east, and Lake St. Martin rather to the north-east of Lake Manitoba: The Pembina river, with its expansion. Lakes Rock, Pelican, Swan and Louise and a district formed of small lakes to the south and west in the province, the principal ones of which are Oak lake, Clearwater lake, near Riding Mountains; Whitewater lake, near Deloraine; Fish lake on the boundary line between Manitoba and Dakota, and Lake Killarney.

Lake Winnipeg District.

I have much pleasure in reporting a considerable increase in the quantity of fish caught, and also an increase in the amount realized by those engaged in this important and growing industry. An examination of the statistics herewith inclosed, will show an increase in the quantity of whitefish caught, of one million pounds. Special attention is paid to the catch of this valuable fish during the summer season as it is in great demand for the export trade.

The catch of pickerel shows an increase of 1,000,000 pounds. These fish are caught principally during the winter season, though many are taken during the spring and autumn.

The amount of pike, another variety caught in the winter season, show an increase of 200,000 pounds, English perch of sixty thousand pounds, tullibees of six hundred thousand pounds; goldeyes of one hundred thousand pounds. And fish used for home consumption, an increase of one hundred thousand pounds. The sturgeon show neither an increase nor decrease from that of last year. There was a decrease in the amount of catfish caught, of one hundred thousand pounds; these fish are in great demand of recent years, and swell considerably the volume of our export trade. There was a small decrease in the amount of caviare manufactured of about five thousand pounds.

The total net increase for Lake Winnipeg district is 2,505,000 pounds, and the total net increase in value is \$269,300.

Lake Winnipegosis District.

There was a slight increase in amount of fish caught in this district of all varieties. The whitefish catch was increased over that of last year by thirty five thousand five hundred pounds ; pickerel by twenty thousand four hundred pounds ; pike by thirty-five thousand two hundred pounds ; tullibees by five hundred pounds ; goldeyes by one hundred thousand pounds ; fish used for home consumption by thirteen thousand two hundred pounds. or a total increase of two hundred and four thousand eight hundred pounds. The increase in value amounts to \$33,678.

Lake Manitoba Dietrict.

There are no whitefish caught in Shoal lake, only pike. In Lake Manitoba the catch of whitefish was increased by one hundred and fifty thousand pounds, pickerel have remained stationary ; of pike there is an increase of four hundred thousand pounds ; of tullibees one hundred and fifty thousand pounds ; of mixed and coarse fish fifty thousand pounds, and of fish used for home consumption fifty thousand pounds, or a total increase of eight hundred thousand pounds, the equivalent increase in value being \$49,875.

There are but few varieties of fish caught in the Pembina river and the small lakes included in the two latter districts and consisting principally of pike, mullets and such coarse fish, these are sold in the local markets, and form no part of our export trade. Summing up and for the purpose of comparision we give the following :

	lbs.	Value.
Year 1902.....	28,438,400	\$929,412
“ 1903.....	32,180,000	1,295,365
Increase.....	3,641,600	Increase. \$365,953

While the increase in the catch was very considerable, there was a decided improvement in the prices which helped to account for the larger amount realized for the season's operations.

The fishing operations are carried on under the commercial licenses on Lake Winnipeg. (the season for which opens June 1st and lasts until August 31st) were on the whole, favourable save for a few days during the latter part of August. This is specially the whitefish season. The sail boat fishermen averaged about 50,000 fish.

The pickerel fishing is carried on by those who take out domestic licenses. Large catches were made, making it a profitable year for those so engaged.

During the fall in the vicinity of Snake island ninety-two boxes or about twelve thousand pounds were taken in ten pieces of gill nets in two days fishing. It was quite common for an Indian with a single piece of gill net to bring in one box of fish weighing about one hundred and twenty-five pounds. In fact they were so plentiful that the fishermen often were compelled to lift their nets about every half hour.

The winter fishing is carried on under a domestic license issued specially for that purpose and is good from Dec. 1st to March 31st. 365 licenses were issued for the winter season ending March 31st.

The reports from those engaged are very gratifying. That it is a very hazardous business is shown by the loss at one time of 200 pieces of gill net, swept away in a storm in the early part of December when the ice formed was already six inches thick. Yet in spite of this great loss to poor men they came out with a balance on the right side.

There seems to be no diminution in the number of pickerel, pike, tullibee, and English perch the principal winter fish.

SESSIONAL PAPER No. 22

SYNOPSIS OF FISHERY OFFICERS' REPORTS.

A. J. McPherson, Overseer for the Lake Winnipegoses District, reports the season a very successful one and that more men are engaged in the business. There has been a good market for pickerel, mullets, tullibees, gold eyes and rough fish.

The figures from Mr. McPherson's district and comments thereon are already embodied in this report.

William Hughes, Guardian, reports in the southern portion of Lake Winnipeg as follows. That he found very few attempting to violate the law. He reports a decline in the quantity of catfish caught, owing to the season at the commencement being very stormy, a number of men losing their nets.

Johannes Magnusson, Guardian at Arnes, on the western shore of Lake Winnipeg, in his report says 'you will notice a great increase in the catch of fish compared with last year. Fall fishing was a great success, as pickerel were abundant all over the district. Winter fishing south of Big island was a failure. From Bull Head south to Big island the catch was good, especially of tullibees. The close seasons were well observed.'

Joseph Polson, Guardian at Winnipeg, for Red river in that vicinity: issued nine seine licenses. The catch was light during the spring, but in the fall the run of fish was much heavier than in previous years, and in an average the catch was ahead of 1902.

For a couple of weeks during the close season I had the river patrolled during the night, and there was no poaching or illegal fishing of any kind. The old fishermen know that it is in their interest to observe the law, but still, we have to be on the lookout for strangers and new arrivals, who are not acquainted with the regulations.

H. Chartrand, Guardian at St. Laurent, reports on the southern portion of Lake Manitoba: 'It will be noticed that there is an increase in the quantities of fish caught as compared with those of last year. The cause in my opinion being more favourable weather. The several close seasons have been well observed throughout the year.'

James Matheson, at Moose Horn Bay, Lake Manitoba, reports on the northern portion of Lake Manitoba, Lake St. Martin and Fairford river: 'That this season has been the most successful in the history of the fisheries, fish of all kinds have been plentiful. The close seasons have been well observed.'

James Gray, Guardian at Cartwright, reports for Lakes Rock, Pelican, Swan and Louise. He reports an average season in his district, and that he had considerable trouble watching for traps placed in the Pembina river.

J. B. Perry, Guardian at Deloraine, reports an average season in his district. The fish caught were mostly used for home consumption. He is very anxious to see Lake Max restocked with fish. The close seasons on the whole were well observed.

I made several trips of inspection to various saw mills, and found a number of mill owners violating the law by allowing rubbish to run into the rivers and streams. In two cases I had piles driven by the parties along the water front and planked up, where they had been allowing the dust to accumulate too close to the water's edge.

There are a number of dams in the province. All are provided with fishways, save two or three. Steps have been taken to have these built according to the regulations, and they will be completed before the spring freshets.

In conclusion, I might say, I have endeavoured to have the people imbued with the desire to observe the regulations for their own sake, and to feel that the department do nothing save in the public interest.

I have the honor to be, sir,
Your obedient servant,

WM. S. YOUNG,
Inspector of Fisheries.

RETURN showing the Number of Fishermen, Quantity, Tonnage and Value of Tugs, Boats, Nets, &c., employed in the Fishing Industry in the Province of Manitoba, for the Year 1903.

FISHING MATERIAL.										OTHER FIXTURES USED IN				
Tugs or Vessels.					Boats.			Gill Nets.		Freezers and Ice houses.		Piers and Wharfs.		
Number.	Tonnage.	Value.	Men.	Number.	Value.	Men.	Number.	Fathoms.	Value.	Number.	Value.	Number.	Value.	
1 Lake Winnipeg and its tributaries	23	2235	219700	19	774	30550	1560	642	321000	64200	129	125500	38	10900
2 Lakes Winnipegosis, Waterhen and Dauphin	4	111	16766	14	137	12970	274	3500	175000	35000	15	7000	10	4385
3 Lakes Manitoba, Shoal and St. Martin	2	24	1950	5	90	3300	200	2000	100000	20000	8	5800	2	150
4 Lakes Rock, Pelican, Swan and Louise					6	90	6	20	1000	200				5
5 Lakes Oak and Clear Water					6	90	6	15	750	150				5
Totals,	29	2370	238410	219	1013	47000	2046	11955	597750	119550	152	138300	50	15435

9 seines, \$300.

SESSIONAL PAPER No. 22

RETURN showing the Kinds, Quantities and Value of Fish in the Province of Manitoba, for the Year 1903.

Number.	DISTRICTS.	KINDS OF FISH.										VALUE.	Number.	
		Whitefish, lbs.	Pickrel, lbs.	Pike, lbs.	Sturgeon, lbs.	Perch, lbs.	Tulibee, lbs.	Gold Eyes, lbs.	Catfish, lbs.	Mixed and Coarse Fish, lbs.	Home consumption, lbs.			Caviare, lbs.	Pickled Whitefish Eggs, lbs.
1	Lake Winnipeg and its tributaries.	7000000	400000	1200000	600000	1000000	1200000	300000	500000	5000000	600000	25000	25000	910,500 00 1
2	Lakes Winnipegosis, Waterhen & Dauphin.	1500000	1900000	1100000			1200	100000		1200000	250000			226,390 00 2
3	Lakes Manitoba, Shoal and St. Martin.	600000	1000000	1300000			350000			850000	250000			147,875 00 3
4	Lakes Rock, Pelican, Swan and Louise.			140000						25000	4000			5,900 00 4
5	Lakes Oak and Clear Water.			100000						25000	4000			4,700 00 5
Totals.....		9100000	6900000	3840000	600000	1000000	1562000	400000	500000	7100000	1180000	25000	25000	1,295,365 00
Total values		500500	276000	115200	72000	35000	50765	12000	30000	142000	35400	25000	1500	1,295,365 00

APPENDIX No. 9.

NORTH-WEST TERRITORIES.

REPORT ON THE FISHERIES OF THE NORTH-WEST TERRITORIES, BY
INSPECTORS E. W. MILLER OF QU'APPELLE AND HARRISON
YOUNG OF EDMONTON.

QU'APPELLE, N.W.T., March 15, 1904.

To the Dominion Commissioner of Fisheries,
Ottawa.

SIR,—I have the honour to make the following report on the fisheries in district No. 1 of the North-west Territories during the year 1903, and to forward statistics showing extent and value of the catch of fish, &c.

QU'APPELLE DISTRICT.

The Moose Mountain lakes in South-east Assiniboia showed a total gain in depth of no less than six feet since the year 1900, and this great increase in volume is characteristic of the present condition of most of our smaller lakes. There were fewer visitors to Moose Mountain than usual in consequence of the difficulty of getting to the lakes over the wet roads, thus less fishing was done. Pickerel are predominant here, but pike now appear to be increasing in numbers. At Devils lake and Fishing lake in Northern Assiniboia, the supply of fish is becoming more plentiful with the deeper waters: these are not whitefish lakes and most of the fishing is done by hook and line. The guardians report a great increase in the number of people fishing and their catches are good.

In Round and Crooked lakes, which are expansions of the Qu'Appelle river, a small amount of net fishing has been done and tullibee are found to be increasing though whitefish are not yet to be caught. Pike, pickerel and mullet are very plentiful and from 4 to 500 persons visited these lakes for the purpose of angling. The waters are in excellent condition and the regulations are well observed.

The catch of fish in the Qu'Appelle lakes for the year was well above the average, all fish except whitefish being found very abundant, and in whitefish there was a small improvement over late years. Pasqua lake continues to supply many pike of large size, from 20 to 27 lbs. and a few maskinonge are again reported. Tullibee are exceptionally numerous in these lakes and could be observed in immense numbers on the shoals in the spawning season. Buffalo fish of good size were very plentiful in June and July. As soon as the ice will bear, a great quantity of fishing is done by suspending short lines with hooks from a long line stretched a little above the ice, in which holes are cut about 5 feet apart the catch of coarse fish made in this way is very large. All the rivers and creeks were high through the summer.

Overseer Silverthorne, reports that at Long lake there were not so many engaged in the fishery as last year and the catch was considerably smaller. The lake is steadily progressing to a recovery of its former basin and the fish caught are large and fat. Whitefish here average about five pounds, pickerel 4½ lbs. and pike 8 lbs. All fish caught met with a ready sale locally and more fishing is expected in the future. The regulations were well kept and no seizures were made.

SESSIONAL PAPER No. 22

Whitefish were very abundant in Eagle Quill lake this year and a good catch was made though not to the extent that could have been, the fishermen being drawn away by other occupations. A portion of the fish from here find a market in the Kootenay district B. C.

MCLEOD DISTRICT.

Net licenses are issued here only for the few small lakes where whitefish and lake trout are found, and the catch by this means is but small. The season was a favourable one for trout fishing and the fish were found very plentiful in most of the streams. An extension of the time for rod fishing will be welcomed by the anglers. Very large lake trout are caught in the Waterton lake by the spoon, three in one day weighing 26, 24 and 20 lbs. respectively and another 38 lbs. caught by a lady.

BATTLEFORD DISTRICT.

The principal fishing lakes here are Jackfish, Turtle and Cold lakes which all have whitefish of very fine quality as well as the commoner fish. There was an increased amount of fishing at Jackfish lake and the catch was very satisfactory. A small number of sturgeon were caught in the Saskatchewan Battle river. The supply is no more than sufficient for local consumption.

PRINCE ALBERT DISTRICT.

Overseer Neilson, reports that the season here was a normal one and as there was no fishing done except for the home market, the catch was not increased. In lakes where fishing is done for sale or barter the holding of a license is insisted on, in the more remote lakes where the Indian and Half-breed residents fish for their own food supply, steps are taken to prevent the wasteful practice of taking the winter supply of whitefish while the fish are spawning on the shoals. The lakes are all reported in excellent condition and there is no doubt but that more fishing could be done if a profitable market was ensured.

CUMBERLAND DISTRICT.

In this district for the first time an export market was provided with the result that over 60,000 lbs. of sturgeon were caught and sold by the few resident fishermen whose catch heretofore had been for local use only. Five and six cents per lb. were paid on the lakes and the fish taken down the Saskatchewan river in small tugs to Cedar lake and thence either over High Portage to Winnipegosis or by Grand rapids over Lake Winnipeg to Selkirk. A small quantity of caviare was made but the Saskatchewan sturgeon in the season at which they are caught are not very rich in roe. No attempt was made to take out whitefish or less valuable fish by this route and the sturgeon were taken in the summer months only. There is an ample supply of fish in the Cumberland district and the opening of this export trade has been of very great benefit to the residents. With improved transport facilities, it would be much more profitable. Licenses were taken in the winter for whitefish at Clearwater lake with the intention of shipping out by trail to the C.N.R. as an experiment.

GRAND RAPIDS.

The lowering of the Saskatchewan river from its very flooded state of 1902 has greatly improved the fishery in Cedar lake. The export trade was confined to sturgeon, which were sent out by the same routes as the Cumberland fish. The catch was much larger than last year and the competition of buyers ensured the fishermen a good

4-5 EDWARD VII., A. 1905

market. Overseer McKay reports that there is no reason whatever at present to suspect any falling off in the supply. Other fish than sturgeon are fished for home consumption only. Attempts at sturgeon fishing in Moose lake did not meet with success, individual fish are caught very much larger than the Cedar lake fish but no good fishery ground appears to have been located. Whitefish here, however, are extremely plentiful and there is a safe surplus for export beyond those needed for local use. A number of licensed men are at work this winter trusting that their large catch will compensate for the long winter haul to market. The increased amount of fishing now being done in these waters renders it more necessary that the close seasons shall be fully enforced: while the licensed fishermen adhere fairly to the regulations there is still a tendency among the old traders and residents to put up a large winter supply of whitefish by the easy method of a few days' fishing on the spawning grounds in the close season. Many of the Grand Rapids men find summer employment in the fisheries at the north end of Lake Winnipeg, and resort to the Cedar and Moose lake fisheries for the winter.

NELSON DISTRICT.

The licensed fishery in this district is confined to the sturgeon caught in the Nelson river, its branches and expansions. While the fish here are much larger and richer in caviare than on the Saskatchewan, the difficulties of transport are much greater as the fish have to be brought up stream, and from the farther points many transhipments are necessary to get over falls and rapids. Great enterprise has been shown by the company operating here in opening up a line of communication by the construction of tramway at the portages and the placing of tugs (3) and York boats on different stretches of the river. The price paid varies from \$1.50 per fish on Playgreen lake to 75 cts. below Red Rock. The actual fishing is nearly all done by the resident Indians, who alternate between hunting and fishing. A few outside fishermen are now being attracted to these waters and such a nucleus of dependable men is certainly needed to make the fishery a success. A feeling exists in some quarters that allowing fish to be sold from these waters will endanger the food supply of the Indians, but the extent of water is so great and the resident population so small, that this fear is groundless, and from a material point of view, the existence of a market for fish cannot fail to be of great benefit to the Indians and encourage industry among them. Care must of course be taken to prevent the intrusion of so many outsiders endangering the native population getting all the share of the fishery of which they are able to avail themselves. No sturgeon are bought or collected during the close season but it is not improbable that some are taken at that time and the caviare held over by the fishermen until later: this will have to be guarded against.

I have the honour to be, sir,
Your obedient servant,

ERNEST W. MILLER,
Inspector of Fisheries.

SESSIONAL PAPER No. 22

N. W. TERRITORIES—District No. 2.

EDMONTON, February 10, 1904.

To the Dominion Commissioner of Fisheries,
Ottawa.

SIR,—I have the honour to submit my first annual report as inspector of this district, and statistics of fisheries for the year just closed.

It is to be regretted that with the class of fishermen with whom I have to deal, it is impossible at present to obtain absolutely correct returns of the catch of fish. I have been obliged in some cases to depend entirely on an estimate, and only at those lakes at which there are guardians, have I been able to secure anything like a correct account of either fishermen, material, or catch. My estimate however is a conservative one, and certainly below the actual catch. There are many lakes and creeks especially in the country south of the Saskatchewan in which large numbers of coarse fish are caught with hook and line. Settlement has increased so rapidly the past three years, that it is hard work to keep account of the settlers even.

The past season has been one of high water, and the lakes and creeks have had every chance to become restocked with fish. The spring freshets so raised the creeks that it was impossible to shut them with dams when the fish were running up stream to spawn.

The infractions of the law have been few. At Pigeon lake Guardian Wood seized 22 small meshed nets the property of Indians, and two nets and a boat belonging to a new settler. Fifteen of these nets were brought in and given up by the Indians, they having been told that if they did so I would not cancel their licenses, these Indians buy most of their nets ready made and they ask me why I allow nets of illegal mesh to be offered for sale.

Their contention seems to me to be reasonable, and it would be of great assistance to me if the offering for sale of small meshed nets were prohibited. Three Germans were fined for shutting up a creek. At lake La Lune two half breeds were fined for illegal fishing. One of these has yet to stand his trial for threatening the guardian with a gun.

For the first time, this winter fish were bought in Edmonton for export east. Any export hitherto has been west to the Kootenais. This winter a Winnipeg firm sent a buyer here, and he has shipped about two car loads of fish from White Whale lake paying three and three-quarter cents a pound. Local dealers always have bought at so much a fish. The price paid this winter represents a gain to the fishermen of $2\frac{3}{4}$ cents a fish. I was pleased to see the buying of fish by the pound started, as fishermen are thereby encouraged, to capture large fish, by using large meshed nets. Though the advent of any one prepared to pay good prices for fish is welcome to the fishermen, it should be understood that there is no opening for commercial fishing by organized companies in the lakes of Alberta. They are all too small to stand it.

The establishment of a hatchery in the district might render commercial fishing practicable, in the larger lakes. I have had many applications from settlers to have lakes in their vicinity stocked with fish. There are many fine bodies of water without any fish in them, and many more only containing some of the coarser kind of fish. The establishment of a hatchery in the district would seem to be the only way by which the wishes of these settlers can be met. I have before this suggested Little Devils lake as a suitable site for a hatchery.

At present half-breeds and Indians are allowed a few nights fishing in spawning season to provide themselves with a supply of fish for the winter. Settlement is now

4-5 EDWARD VII., A. 1905

increasing so fast that it would be well I think to terminate this privilege so far as half-breeds are concerned as soon as possible at all lakes, and immediately at Pigeon lake, Lake Ste. Anne, Lac la Lune, and White Whale lake. As a class half-breeds are not now entitled to any special privileges.

Though the number of guardians in the district has been increased, the settlement of the country will soon call for the appointment of more if the coarse fish are to be protected.

A great many sawmills are operated in this district every winter, and they will require watching to prevent sawdust and other mill rubbish from being deposited where it may be washed into the creeks by the spring freshets. A notice calling the attention of mill owners to the law on this subject was issued by your department this fall, and will doubtless have a good effect. I am forced to the conclusion, from personal observation and from evidence received, that it would greatly help to conserve the whitefish of Alberta, if the close season on the north side of the Saskatchewan river ran from the October 15 to December 15, and on the south side from October 15 to January 1.

I saw this winter many fish from White Whale lake, caught late in November and early in December, still full of spawn. Guardian Wood informs me that at Pigeon lake many fish were still full of spawn at the end of close season.

I would further strongly recommend that the legal mesh in all lakes where there are whitefish be made five and one-half inches. A five-inch mesh captures a very small fish. Some of the half-breeds of Lake Ste. Anne asked me, last year, to have the legal mesh for their lake made six inches.

Lake La Biche.—At this lake the fishermen were this year allowed to fish on the bars of the islands, instead of on the main shore bars, and made a big catch of fish. This lake is now well stocked with fish, and as there is no export there is no danger that it will run down.

Beaver Lake.—Fish in this lake are increasing every year. It is fished by a small band of Indians. There is no settlement of any kind.

Whitefish Lake, Saddle Lake, Goodfish Lake, Floating Stone Lake.—These lakes are all in Indian reserves. The two latter are completely fished out, and Saddle lake nearly so. It is a shame to have this so. The fish of these lakes were of the finest. If the Indians of this reserve would observe the close season they might for a year or two be permitted to make a fall fishery at Lake La Biche. If the Indian Department is not inclined to look after the preservation of the fish in these lakes, I would recommend that they be put on same footing as other lakes, and a guardian put on to enforce the regulations.

Little Whitefish Lake lies north of Victoria. A very small lake well stocked with fish. Spawning season is after Christmas and is soon over. Present close season gives no protection.

Beaver Lake in the Hills.—The high water of past three seasons has allowed this lake to become restocked with fish. It will remain so until shallow water again causes the fish to die off.

Hastings Lake is full of fine large pike.

Cooking Lake.—A beautiful sheet of water frequented as a summer resort by Edmonton people. Fish reported as fairly numerous this past season, having come in from Hastings lake. There are many demands from frequenters of this lake to have it stocked with black bass or some other game fish.

Dried Meat Lake is a widening out of the Battle river, and is well stocked with coarse fish of all kinds. Fishing is carried on principally with hook and line.

Battle Lake contains fine whitefish as well as coarse fish. Lumbermen have been giving some trouble by erecting a dam at mouth of lake, the matter is now being arranged by your department.

Buck Lake.—The land around this lake is not yet open for settlement, as soon as it is, the fish in this lake will become valuable. The whitefish are large and good.

Gull Lake is fished principally by hook and line, though some are beginning to use nets. A colony of Swedes along this lake began to use spears through the ice, but the lake is now well looked after by Guardian Mobley of Lacombe.

SESSIONAL PAPER No. 22

Buffalo Lake affords a winter's supply of coarse fish killed with hook and line through holes in the ice, to a large number of people, many of whom come a long way to fish. The bass put in this lake a year ago have not yet had time to increase. None have been found dead. One was killed this fall, it had grown well. Those put in Tanglefoot lake are reported as doing well.

Pigeon Lake is the heaviest fished lake in Alberta, and up to this has held its own well. I think, however, that the limit of its capacity has been reached, if not exceeded. My last reports are that the fish are running smaller, and the catch not holding out so well as in previous years. Settlers are now coming in to this lake, and next season I think licenses should only be given to the Indians and residents settlers.

Lake la Lune.—Fish are reported as increasing. The fish in this lake are of large size and fine quality.

Lake Ste. Anne.—This lake is picking up fast. The fishermen have not yet found out how to kill fish in the winter months and as the roads forbid the transportation of fish in the summer, very few of these fine fish find a market at Edmonton.

White Whale Lake.—A great catch of fish was made at this lake by a few fishermen, and were bought by the Winnipeg firm previously referred to, and shipped to Buffalo. Fish in this lake will weigh about three pounds each, they are improving in quality, but are not as large, or so good fish, as those of other lakes in Alberta.

Little Devils Lake.—Fish in this lake were reported as increasing a year ago, but the increase is not so great as I then thought it was. The whitefish from Lake Ste. Anne's do not seem to come down the river to this lake as one might expect them to do. With regard to the lakes in the unorganized territories I can say very little as yet.

I would recommend that at Lesser Slave lake, White Fish lake, Wabisca lakes, and all lakes where there is a settlement, the sale of fish killed in the spawning season should be prohibited, and the number of nets limited, also have the size of mesh stated. Five and a half inches is small enough for the fish of these lakes.

I have the honour to remain, sir,
Your obedient servant,

HARRISON S. YOUNG,
Inspector of Fisheries District No. 2, N.W.T.

SESSIONAL PAPER No. 22

RECAPITULATION

OF the Yield and Value of Manitoba and the North-west Territories,
for the Year 1903.

Kinds of Fish.	Quantity.	Price.	Value.
		\$ cts.	\$
Whitefish.	Lbs. 11,293,500	0 05	610,175
Trout	72,000	0 05	3,600
Pickereel.....	" 7,266,000	0 04	290,640
Pike.....	" 4,545,500		129,310
Perch.	1,006,000	0 03½	35,240
Sturgeon.....	" 980,000		94,800
" caviare	33,100	1 00	33,100
Whitefish eggs	25,000	0 06	1,500
Tullibee...	" 1,702,000	0 03¼	56,365
Catfish.....	" 500,000	0 06	30,000
Gold-eyes.....	" 400,000	0 03	12,000
Coarse fish.....	" 7,553,500	0 02	146,535
Home consumption.	1,180,000	0 03	35 400
Total for 1903.....			1,478,665
" 1902.....			1,198,437
Increase.....			280,228

RECAPITULATION

OF the Number of Fishing Boats, Nets, &c., used in Manitoba and the North-
west Territories, for the Year 1903.

Articles.	Value.	Total.
	\$	\$
34 fishing tugs (2,460 tons) (237 men).	245,410	
2,338 " boats (2,336 men).....	60,450	305,860
15,840 gill nets (787,500 fathoms).....	133,780	
9 seines (300 fathoms).....	300	
2,000 hand and night lines.....	6,000	140,080
174 freezers and ice houses	144,900	
54 fishing piers and wharfs	15,685	160,585
Total		606,525

APPENDIX No. 10.

BRITISH COLUMBIA.

REPORT ON THE FISHERIES OF BRITISH COLUMBIA FOR
THE YEAR 1903, BY INSPECTOR C. B. SWORD.

NEW WESTMINSTER, B. C. April 27, 1904.

To the Dominion Commissioner of Fisheries,
Ottawa.

SIR,—I have the honour to inclose statistics of the fisheries of British Columbia for the year ending December 31, 1903.

The total returns for this year show a falling off from the total of 1902. \$4,742,965, against \$5,284,824, a decrease of \$541,859. This is more than accounted for in the salmon fishery in which there is a decrease of \$790,637.

With the exception of sturgeon the fishing for which is practically at an end, the other varieties show satisfactory increases.

The regulations have been on the whole fairly well observed. At my suggestions Capt. Newcombe of the ss. *Kestrel* patrolled the boundary line below the 49th parallel during the salmon fishing season for two weeks, with a view to prevent fishermen from the United States poaching with purse seines in Canadian waters. These seines are illegal in our waters, and from time to time reports have been received of trespass by foreigners with them. Capt. Newcombe did not find anything to justify the reports: at the same time, the occasional appearance of the *Kestrel* on this line during the fishing season, is likely to have a good effect, and if Capt. Newcombe's other duties permit, I will suggest the desirability of his putting in a similar appearance during the coming season.

Capt. Newcombe also reported that he was at Skeena river during the fishing season, and that his presence in the estuary during the weekly close season stopped the illegal fishing of quite a number of boats which had already started out but turned back when they saw the *Kestrel*. He strongly endorses the recommendation that I have already made to the department, that the steamer or steam launch, is an absolute necessity for the officer on the Skeena before he can effectively put a stop to fishing during prohibited hours. The impossibility of enforcing the regulations, as regards the observance of the weekly close time, with nothing better than row boats, is having a very bad effect and this is likely to get worse every year. On the Fraser river, which is in some respects more easily patrolled than the Skeena, we have to supplement the service of the two steamers and five guardians by 4 or 5 extra boats as special patrols for the end of the week. I suggested this expedient for the Skeena to Mr. Helgesen, the officer there, but he told me it would be quite impossible to get men to serve there in this capacity.

Among other changes in the regulations suggested by the canners and endorsed by the fishermen is one that longer nets than the present limit of 150 fathoms, should be allowed in the open waters of the Gulf of Georgia. This I trust the department will allow in time for the coming season. A net of 300 fathoms in the gulf, of the limited depth used there, can be easily handed by two men, and would be as effective as two nets of half the size requiring four men to operate them.

While generally those interested in the fishing industry, (especially when on a large scale) give readily every assistance to the officers in securing exact statistics, it would

SESSIONAL PAPER No. 22

be very desirable that this should be made obligatory, on all dealings in any kinds of fish in the same way as is provided in the case of lobster factories.

There are some points in regard to various fisheries to which I should like to call attention, but this can be better done under the specific headings.

Salmon.

The total salmon catch for 1903 is given as follows:—

Cases canned	473,847
Barrels salted	7,075
Fresh, smoked, and dry salted	9,343,200 lbs.

Against in 1902:—

Cases canned	627,162
Barrels salted	6,680
Fresh, smoked, and dry salted	13,041,438 lbs.

The decrease, it will be seen, is in the canned and dry salted product, the salted, fresh, and smoked showing a moderate surplus.

With regard to the canned salmon this is made up of:—

	Cases.
Sockeye	369,009
Cohoos	49,140
Spring	25,533
H'one (Humpbacks)	30,165
Total	473,847

Against in 1902:—

	Cases.
Sockeyes	534,161
Cohoos	47,234
Spring	19,042
H'one (Humpbacks)	26,097
Q'ualo (Dog salmon)	628
Total	627,162

It will be seen that the decrease in the sockeye pack this year (1903) more than accounts for the total decrease, and that while there was a falling off in the Fraser river pack of 90,821 cases, the Skeena and Naas river districts show a decrease of more than 50 per cent. This is the case notwithstanding that in the latter district a new cannery was in operation on Observatory Inlet.

The pack of sockeyes this year on Puget Sound (these being practically all Fraser river fish) was 151,828 cases against 342,974 cases in 1902, so that for the first time for some years the Fraser river packers had a larger pack 204,849 cases of the Fraser river fish than their competitors on the Sound.

Unsatisfactory as this year's pack has been, it would be premature to assume the two poor years of 1902 and 1903 imply a permanent falling off in the supply. The continual fluctuations in the runs from the first year in which salmon fishing for commercial purposes was first prosecuted on the Fraser and the heavy run which took place so recently as 1901 gives reason to hope that the paucity of fish in the last two years may have been occasioned by some temporary causes unknown to us and does not imply a permanent decrease in the supply. It somewhat strengthens this view that the supply in the northern rivers was also short.

4-5 EDWARD VII., A. 1905

However this may be, it is to be hoped that the uneasiness generally expressed by the packers on Puget Sound, as to the future of the industry there may lead them to acquiesce in the necessity of providing and observing a weekly close time, similar to that in force in Canadian waters so that a number of fish sufficient to keep up the supply may be allowed in each year, to reach their natural spawning grounds. No increase in the number of hatcheries, which is the remedy in which the Puget Sound canners profess to repose most confidence, can be of much use unless a sufficient number of fish to supply eggs to stock them are allowed to reach the spawning grounds.

STURGEON.

This fishing is practically extinct. There are still fish of some size taken occasionally, but not enough for the local demand. There is no lack of young sturgeon in the river, so that it would appear that the large fish formerly so common, had taken years to reach their growth, and with the increased demand, the fishing has been too energetically prosecuted to allow the time needed for their development.

HALIBUT.

Shows a steady increase, 10,209,000 lb. against 8,417,000 lb. in 1902. The catch of the New England Fish Co., the pioneers in the development of this industry, accounts for the greater part of this increase of 1,792,000 lb., though the independent companies show a larger percentage of increase, on the comparatively small amount handled by them. There is still room for a large development in this fishery, though as these fish are exposed to capture at all stages of their growth, we must look for a decrease in their numbers when the fishery has been fully developed.

It would be noted that most of the halibut credited to the Fraser River District, are taken on the halibut banks off Queen Charlotte's Islands. These come into the Fraser river district returns as having been brought to land at Vancouver.

HERRING.

It will be seen that under all its forms, there are substantial increases in the product of this fishery. The fresh and salt column shows more than double the output of 1902, 3,620,000 lb. against 1,653,600 lb. Smoked herring too shows an increase of over 25 per cent. There is also an item of 3,500 cases canned herring. This is the first time such an item has appeared in the returns, and although this lot was packed more with the object of utilizing cans left over, owing to the short run of salmon, than with the expectation of making a direct profit, there seems to be no good reason why these fish put up in this way, should not be marketed successfully. A firm, has I understand already made arrangements to build a cannery at Nanaimo, with the view of canning herring in the winter, after the salmon runs are over. This year's run of herring at Nanaimo, was very large. The water of the harbour was so full of them at one time, that large numbers were washed upon the beach by the waves of a passing steamer. As the herring like the salmon, are only taken when they come to the shore to spawn, there seems no reason why a permanent industry of great value could not be built up in the utilization of them in various ways, and there is every prospect of this being the case, though as yet the greater part of the catch is disposed of as bait for the halibut fisheries.

OULACHONS AND SMELTS.

Both of these varieties show a substantial increase. As yet there has been no attempt to any extent to find a market for these abroad and the figures given represent merely the local consumption, the Indians being the main consumers in the case of the former. As both of these fish are unrivalled delicacies it can only be a question of a very short time, before, by shipping them in some form which will retain their flavour, a large and profitable export business will be carried on in them.

SESSIONAL PAPER No. 22

MISCELLANEOUS.

Some years ago a considerable business was done in putting up black cod or skill. This however was not very successful apparently from a difficulty in the curing, This however is again being attempted with better prospects of success and accounts for the increase this year from 15,000 lb. or 75 brls in 1902 to 255 brls.

The number of hair seals taken is exact, but the localities given are only approximately correct.

No sea otter skins were reported as taken this year.

With regard to the output of fish oil which shows a large increase, the difference in the returns from the Naas river and Skeena river as compared with former years districts requires some explanation. The officers for these districts had special instructions to secure all available data to form a close estimate and the figures for the present year are the result. Although the heavy run of oolachans this year would have naturally caused some increase, it is evident that the quantities given for this product in former years must have been much under estimated.

The increase shown in fish oil for Nanaimo district is practically the product of the Japanese oil and guano factory at Departure bay.

This factory and the Fraser river oil and guano factory near Ladner account for 1,060 tons guano.

I have given the canned crabs 500 cases, separate this year from the canned clams, as this is an industry which is susceptible of considerable development and the returns from which, will, I hope, find a place in future reports.

The output of canned clams it will be seen is steadily though slowly increasing.

The take of fur seal skins was greater this year than last. 20,496 skins against 16,883 in 1902, but the market was not so good; the skins this year being valued at \$15 as against \$20 in 1902, so that the total value of the 1903 catch is somewhat less than that of 1902.

Two of the Victoria sealing fleet operated this year on the coast of South America getting a catch there, included in the above amount of 5,795 skins.

I have the honour to remain, sir,

Your obedient servant,

C. B. SWORD,
Inspector of Fisheries.

A.—BRITISH COLUMBIA SALMON PACK, 1903.—(CASES.)

Name of Cannery.	Owners or agents.	District.	Sockeye.	Choco.	Spring.	Hump's.	Cannery Totals.	District Totals.
Albion	B. C. Packers' Association.	Fraser River.	6,688				6,688	
Atlas	"	"	3,702		3		3,705	
Anglo American	"	"	3,150		321		3,471	
Acme	"	"	3,769				3,769	
Brunswick	"	"	6,212	9,533			15,745	
Can. Pacific	"	"	4,451		7		4,461	
Carries	"	"	8,781		131		8,912	
Colonial	"	"	3,440				3,440	
Celtic	"	"	3,551				3,551	
Cleeve	"	"	4,725	13			4,738	
Dinsmore Is.	"	"	3,585	1,677	43		5,305	
Ewens	"	"	7,612	103	225		7,940	
Imperial	"	"	15,562	195	90		15,847	
Pac. Coast	"	"	5,481				5,481	
Terra Nova	"	"	7,716				7,716	
Westminster	"	"	5,340				5,340	
Britannia	Anglo, B.C. Packing Co.	"	7,530				7,530	
B. B. & Canoe Pass	"	"	6,305	2,973			9,350	
Burrells	"	"	5,034		200		5,234	
Phenic	"	"	6,547				6,547	
Wadhams	"	"	5,396				5,396	
English Bay	Malcolm, Cannore Co.	"	3,183		14		3,197	
Gulf of Georgia	"	"	11,696	150			11,846	
Scot Canadian	"	"	10,463				10,463	
Beaver	J. H. Todd & Sons	"	6,960	4,000	380		11,340	
Richmond	"	"	4,495				4,495	
Deas Island	B.C. Canning Co.	"	6,887	1,377	238		8,502	
Fraser River	Canadian Canning Co.	"	4,986		45		5,031	
Star	"	"	7,490	200	191		7,881	
Vancouver	"	"	4,572		45		4,617	
Lighthouse	Federature Brand Co.	"	4,526				4,526	
St. Mungo	St. Mungo Canadian Co.	"	6,038	1,327		810	11,175	
Eagle Harbor	National Cannery Co.	"	3,489	716	55	2,607	6,867	
Cit. Northern	G. N. Canning Co.	"	2,288		21		2,309	
Industrial	C. S. Windsor.	"	3,192	461		1,087	4,740	
Fraser River Totals.			204,849	25,725	2,084	4,504	237,162	237,162

SESSIONAL PAPER No. 22

Alert Bay	B.C. Packers Association	Vancouver Island	1,505	219	1,818	3,542
Clayoquot	Clayoquot Canning Co.	"	3,950	487	513	4,950
Alberni	Alberni Packing Co.	"	3,390	353	125	3,868
Vancouver Is. Totals			8,845	1,059	638	12,360
Balmoral	B.C. Packers Association	Skeena River	5,284	1,994	3,596	10,874
Cunningham	"	"	3,313	2,015	2,894	8,458
Standard	"	"	3,116	306	88	3,540
B. A. & N. Pacific	Anglo, B.C. Packing Co.	"	13,473	1,878	3,339	20,646
Inverness	J. H. Todd & Sons	"	5,261	650	613	9,687
Oceanic	B. C. Canning Co.	"	6,277	1,390	1,681	13,941
Claxton	Wallace & Bros.	"	5,988	1,141	1,546	12,473
Carlisle	Carlisle Canning Co.	"	4,179	342	798	6,483
Hermans	P. Herman & Co.	"	2,611	650	3,508	9,135
Cassiar	Cassiar Packing Co.	"	1,521	926	1,034	3,481
Skeena Totals			51,023	11,292	17,975	98,688
Brunswick	B.C. Packers Association	River Inlet	18,396	283	283	18,704
Wadhams	"	"	20,569	93	316	20,978
Good Hope	Anglo, B.C. Packing Co.	"	12,268	185	62	12,515
R. L. & Victoria	B.C. Canning Co.	"	16,885	34	273	17,192
Rivers Inlet Totals			68,148	219	872	69,389
Mill Bay	Federature Brand Co.	Naas River	3,916	1,008	1,049	5,973
Naas Harbour	"	"	4,522	1,179	426	6,127
Pacific Northern	P. N. Packing Co.	Observatory Inlet	2,932	2,940	122	5,994
Naas District Totals			11,370	5,127	1,597	18,094
Skidegate	Queen Charlotte Packing Co.	Q. C. I.	300	300	300	300
Lowe Inlet	B.C. Packers Association	Lowe Inlet	6,919	3,200	77	10,196
Kimsquit	R. Draney	Kimsquit	5,378	1,010	417	6,805
Namu	"	Namu	2,819	1,508	835	5,162
Bella Coola	B.C. Packers Association	Bella Coola	4,088	1,223	1,430	9,741
Hickey	W. Hickey & Co.	Inlet	5,300	650	650	5,951
North Coast Totals			24,801	5,718	2,367	38,154
S U M M A R Y.						
Fraser River			204,849	25,725	2,084	237,162
Vancouver Island			8,845	1,059	638	12,360
Skeena River			51,023	11,292	17,975	98,688
River Inlet			68,148	219	872	69,389
Naas District			11,370	5,127	1,597	18,094
North Coast			24,801	5,718	2,367	38,154
			369,009	49,140	25,533	473,847

B.—BRITISH COLUMBIA SEALING REPORT, 1903.

Number.	Vessels.	Tons.	British Columbia Coast.		Vicinity of Copper Island.		Behring Sea.		Other Points.	Total catch skins.
			Males.	Females	Males.	Females	Males.	Females		
1	Allie I. Algar.....	75	189	141	135	102	4	1	.....	572
2	Annie E. Paint....	82	287	299	.....	.....	120	190	.....	896
3	Carrie C. W.....	62	83	49	.....	.....	471	362	.....	965
4	Carlotta Cox.....	70	129	95	81	24	32	103	.....	474
5	Casca	63	117	126	40	66	140	156	.....	645
6	C. D. Rand.....	51	88	48	.....	.....	260	297	.....	693
7	City of San Diego..	16	150	150	.....	.....	.....	.....	.....	300
8	Diana.....	50	.....	.....	.....	.....	189	153	.....	342
9	Director.....	87	51	16	.....	.....	238	242	.....	577
10	Dora Sieward.....	93	54	36	283	246	41	26	.....	786
11	Enterprise	69	46	53	.....	.....	331	201	.....	631
12	Geneva.....	92	1	2	.....	.....	.....	.....	.....	3
13	G. W. Prescott....	40	13	16	.....	.....	.....	.....	.....	29
14	Ida Etta.....	69	27	26	.....	.....	74	413	.....	540
15	Jessie... ..	48	.....	.....	.....	.....	194	289	.....	483
16	Libbie.....	93	116	105	.....	.....	444	498	.....	1,163
17	Oscar and Hattie .	81	36	37	125	137	.....	.....	.....	335
18	Penelope.....	70	178	103	.....	.....	232	518	.....	1,031
19	Sadie Turpel	56	.....	.....	.....	.....	92	169	.....	261
20	Triumph.....	98	29	26	308	263	28	35	.....	689
21	Umbrina.....	99	179	77	.....	.....	422	399	.....	1,077
22	Vera.....	60	280	205	.....	.....	.....	.....	.....	485
23	Victoria.....	63	72	30	.....	.....	213	189	.....	504
24	Tillah May.....	66	28	32	.....	.....	133	262	.....	455
25	E. B. Marvin..	96	.....	.....	.....	.....	.....	.....	2,474	2,474
26	Florence M. Smith.	99	.....	.....	.....	.....	.....	.....	3,321	3,321
	Indians Canoes ..		.....	.....	.....	.....	.....	.....	.....	765
	Totals.		2,163	1,702	1,072	838	3,658	4,503	5,795	20,496

SESSIONAL PAPER No. 22

RECAPITULATION

Of the Yield and Value of the Fisheries of British Columbia, for the Year 1903.

Kinds of Fish.		Quantity.	Price.		Value.
			\$	cts.	\$ cts.
Salmon, canned.....	48-lb. cases.	473,847	4	80	2,274,465 60
" salted	Brls.	7,075	10	00	70,750 00
" fresh.....	Lb.	2,506,850	10		250,685 00
" dry salted	"	6,325,600	05		316,280 00
" smoked.....	"	510,750	10		51,075 00
Sturgeon.....	"	30,000	10		3,000 00
Halibut	"	10,209,000	05		510,450 00
Herring, fresh and salted.....	"	3,620,000	05		176,000 00
" smoked.....	"	568,440	10		56,844 00
" canned	48-lb. cases.	3,500	4	00	14,000 00
Oolachans, fresh.....	Lb.	1,024,320	05		51,216 00
" salted	Brls.	4,070	10		40,700 00
" smoked.....	Lb.	45,200	10		4,520 00
Smelts.....	"	450,060	05		22,503 00
Trout.	"	364,200	10		36,420 00
Cod.....	"	612,700	05		30,635 00
Skill.....	Brls.	255	10	00	2,550 00
Shad.....	Lb.	12,000	05		600 00
Mixed fish	Lb.	591,500	05		34,575 00
Hair seals.....	Skins.	5,950	75		4,462 50
Fish oil	Galls.	223,550	35		78,242 50
" guano.....	Tons.	1,060	30	00	31,800 00
Canned crabs.....	48-lb. cases.	500	4	00	2,000 00
" clams.....	" "	3,615	4	80	17,352 00
Fish roe.. ..	Lb.	8,000	05		800 00
Clams and mussels.....					13,000 00
Oysters					18,000 00
Crabs and abelonies.....					21,000 00
Shrimps and prawns.....					7,000 00
Estimate of fish not included in above.....					300,000 00
Fur seals.....	Skins.	20,496	15	00	307,440 00
Total					4,748,365 60

Capital invested in British Columbia Fisheries, 1903.

Description of Property.		Number.	Values.	Totals.
			\$ cts.	\$ cts.
<i>Fisheries—</i>				
Canneries, wharfs, &c		75	1,312,500 00	
Vessels		169	355,050 00	
Boats		5,024	306,640 00	
Gill and seine nets (fathoms)		809,950	615,637 00	
Trawls and lines			12,025 00	
Scows		150	30,000 00	
Cold storage plants		7	87,500 00	
Oil factories		4	50,000 00	
Salteries		4	7,500 00	
				2,776,852 00
<i>Fur sealing—</i>				
Vessels		40	452,250 00	
Boats and canoes			6,500 00	
Guns and equipment			20,500 00	
				479,250 00
Capital total				3,256,102 00

Employees in Fisheries.		Number.	Totals.
Fishermen and cannery employees		17,915	
Employed on vessels		585	
			18,500
<i>Sailors and hunters in fur sealing—</i>			
White men		299	
Indians		538	
			637
Total			19,137

SESSIONAL PAPER No. 22

APPENDIX No. II.

REPORT

ON

FISH-BREEDING OPERATIONS IN CANADA

1904

REPORT OF PROFESSOR EDWARD E. PRINCE, COMMISSIONER AND
GENERAL INSPECTOR OF FISHERIES FOR THE
DOMINION OF CANADA.

OTTAWA, December 31, 1904.

To the Honourable

. RAYMOND PRÉFONTAINE,
Minister of Marine and Fisheries,
Ottawa.

SIR,—I have the honour to submit my annual report upon that important branch of fisheries work comprised in the fish-breeding system of the Dominion of Canada. In this report, the tenth which I have had the privilege of presenting since the fish culture operations were placed in my hands, I have again the satisfaction of stating that the total output of fry shows a considerable increase over the previous year. Inclusive of lobsters but exclusive of black bass which are reared every season at the Government ponds, Belleville, the quantity of small fish planted last year in the waters of the Dominion amounted to the large total of 473,258,000 this quantity, I may add, being exclusive of berried lobsters distributed from the Gabarus pond, C.B.

There are now twenty-two establishments devoted to the artificial incubation of the eggs of fishes and of them four are engaged in the propagation of lobsters. Excepting the lobster establishments these hatcheries are all at the present time filled with the eggs of the various species collected during the spawning season at the different points selected in the several provinces. Particulars relative to the hatching and distribution of the fry from nineteen of the above mentioned hatcheries are fully given in the reports of the officers in charge which follow this report, the account being descriptive of the quantities and the species of fishes' eggs and of the methods of planting and the localities in which the fry were planted. Five new hatcheries, possibly six, may be constructed during the coming year, three in British Columbia, two on the Atlantic coast, and one on the inland waters. The work of the established hatcheries has aroused the liveliest public interest, and the majority of people directly interested in the fisheries are convinced of the success of artificial stocking with fry from the Dominion hatcheries.

Every year I receive from all parts of the country testimony to the benefits of the planting of fry incubated and hatched out in the Government institutions under my responsible charge. To take one or two examples, selected at random. In Charleston

4-5 EDWARD VII., A. 1905

lake, one of the lakes of the Rideau system, province of Ontario, the department has planted season by season, quantities of whitefish, in addition to salmon trout or lake-trout and other kinds. The whitefish placed in Charleston lake for many years have so thickly populated its waters, that local parties who take great interest in the lake importuned the department to cease planting any more. Charleston lake, they claimed, is now so abundantly stocked with whitefish that the people, locally resident, refused to take any more when arrangements had been completed, and when the usual number of cans of living fry were sent. The cans had to be taken to other waters, and planted in lakes not originally contemplated. It must be remarked that while whitefish have been rendered so abundant in these lakes, no extensive commercial netting has been carried on, and the residents, referred to, desire extensive planting of game fish—the lake in question being resorted to by great numbers of sportsmen, who do not desire to encourage the netting of fish.

Again, Lake Claire, P. Q., was planted by my arrangement with whitefish, four or five years ago. There were none of these fish there before; but during the past season quite a number (2 lbs. weight and over) were caught in small nets, and they appeared in very large schools in the shallows this fall. I have in my previous reports given numerous instances of the success of artificial stocking of lakes and rivers with salmon and with trout.

In view of the continual extension of fish-breeding operations, I have found it impossible to as fully carry out the work of personal superintendence as formerly, and, on my recommendation, Mr. F. H. Cunningham was appointed in 1901, to assist in these duties. After acting as inspector of fish hatcheries for four years, he has recently been advanced to the position of superintendent, and as such he submitted his report this year which will be found appended to my own report. Mr. Cunningham's appointment will relieve me of much of the routine work, which had become so extensive and complicated, that I found it too heavy to completely overtake, and I shall now be able to do more in the way of hatching new kinds of fish, not hitherto included in Dominion fish-breeding as well as to extend the present operations in various directions.

The first step which I have taken in this regard, was the securing for the first time under the Canadian government, of a good supply of land-locked salmon eggs. Three or four attempts had been made before, but without success, and *en route* to Boston, New York and Philadelphia, to attend to important official work, I spent a few days this fall in waters connected in the St. Croix lake system bordering on the state of Maine. I had on five or six previous occasions inspected these lakes and was convinced, that if properly planned and efficiently carried out, there need be no fear of failure in an attempt to procure land-locked salmon ova. These fish are well-known all the world over as abounding in New Brunswick and Maine lakes. I arranged, therefore, to have in late October or early November my scheme carried out, and having personally selected the place most suitable for taking the ripe parent fish, Mr. F. H. Cunningham, with the able assistance of Mr. Alexander Finlayson, fixed up a camp, and assiduously secured an ample stock of land-locked salmon, male and female, in their course of migration, from the lower to the upper Chamcook lakes; but the yield of eggs was smaller than was anticipated, a point to which Mr. Cunningham refers in his reports as officer superintending fish culture. That officer also refers to the season's work at the department's black-bass ponds which I fully described in my report last year, and it is satisfactory to find that the very favourable results achieved in previous years, have been maintained in regard to the rearing of that valuable game and food fish, the small-mouth black bass.

I have in former reports taken occasion to make reference to points of vital interest in the science of fish-breeding by artificial aids, to which it seemed important to call public attention, and I may in passing, refer to two popular ideas which prevail, and which are so seriously erroneous that the work of departmental fish-culture has it must be admitted occasionally suffered on account of their prevalence in the public mind. First: As a matter of scientific knowledge and of practical experience, the impregnated eggs of fishes, as a rule can be, conveyed considerable distances with perfect safety under proper conditions, and in the care of reliable officers. Hence the view that a hatchery should be located in close proximity to the spawning grounds whence the supplies of eggs are obtained has not a good basis. Yet hatcheries have on many occasions been located in remote and often very inaccessible places for the reason that the

SESSIONAL PAPER No. 22

fish spawned in waters close by. A hatchery should for many important reasons be placed in a central accessible location. Any mishap, accident or break-down can be easily attended to and the work of incubation and of rearing the fry carried on with facility. Further, the work of distributing the fry is easily carried out from a centrally, properly placed hatchery, whereas an institution of this kind built in an inaccessible region near the remote head-waters of a river and almost always distant from railway communication suffers from every disadvantage, so far as ready and safe conveyance of fry is concerned, unless exceptional water facilities are afforded. It is best therefore to build hatcheries at good distributing points, easy of access if any accident occurs in the winter season and admitting of regular official inspection.

Every fish culturist is aware that in the early days of British hatcheries, the salmon and other eggs collected by Frank Buckland and others, were obtained in Scottish or North of England rivers and shipped by road and rail to the South, or it may be sent many months' voyage across the ocean to Australia and New Zealand.

Secondly : the common opinion that young fishes can be carried long distances with safety, and successfully planted in distant rivers and lakes is a grave error. Newly hatched fry can with special care and constant personal attention be conveyed for journeys of twelve to twenty-four hours without serious loss ; but to ensure the best results all young fishes should be planted within as few hours as possible after leaving the hatchery. If planted within one or two hours there need be no loss by death (really asphyxia) and if within 6 or 8 hours the results will be highly favourable unless the weather be abnormally warm and the exposure prolonged. Fry will survive the jolts and concussions, the heat and water changes involved in a journey of 20 to 24 hours as I can testify, for I have conveyed cans containing a total quantity of several hundred thousands of salmon-trout or great lake trout fry (8 to 10 days old) a journey of 28 hours (including express wagon, three separate railway journeys, transit across a river by scow, and a rough journey of 2 or 3 hours over a country road) without losing more than 20 to 30 per cent of the fish, those surviving being very lively and vigorous. Yet, it must be confessed that young fish even if they live, must be weakened, perhaps, permanently affected by such trying journeys. When critics say : 'Your government officers brought a lot of young fish, but 20 per cent of them were dead.' My reply is 'It is a surprise that 100 per cent were not dead, after such a trying journey.' Or if, as is sometimes said, the results in certain waters have proved disappointing, only a few fish surviving and reaching a mature size, the reply is that the best results cannot be expected if fry are planted, which have been debilitated, and probably permanently injured, by the violent and almost fatal experiences of long trips by team and rail. It is necessary therefore to plant fry, and even reared alevins, many months old, with all rapidity after leaving the hatchery, and the nearest hatchery should be selected by applicants. If species of fish from more distant regions are desired, eggs rather than fish should by preference be sent. Fry will, if very favourably conveyed, survive and be of benefit ; but only strong active healthy fish can be relied upon if the fry planted are strong, active and healthy.

As the Superintendent, in his report, which occupies its usual place at the end of my report, treats of the work accomplished in the hatcheries in different parts of the Dominion I need not dwell upon the work of each respectively. Suffice it to say that the astonishing numerical results shown in the following tables testify to its success, and indicate the extent of the operations of each hatchery during the past year.

The gross output of fry of all kinds from all the hatcheries operated under the Dominion Government during 1904 was 473,258,000, as follows :—

Atlantic salmon (<i>Salmo salar</i>)	10,888,000
Pacific salmon (<i>Oncorhynchus</i>)	16,056,000
Pacific Trout (<i>Salmo irideus</i>)	98,000
Speckled (<i>Salvelinus fontinalis</i>)	141,000
Salmon Trout (<i>Salvelinus namaycush</i>)	2,575,000
Pickrel or Doré (<i>Stizostedion vitreum</i>)	24,000,000
Lake whitefish (<i>Coregonus clupeiformis</i>)	82,500,000
Lobster (<i>Homarus americanus</i>)	337,000,000

FISH—BREEDING.

STATEMENT showing the Places where and the Years in which the several Fish Hatcheries have been erected; also the number of fry distributed from each Establishment annually since they were built, including the year 1904.

Year.	ONTARIO.				QUEBEC.				NEW BRUNSWICK.				Number.
	Newcastle.	Sandwich.	Ottawa.	Magog.	Tadoussac.	Caspé.	St. Alexis des Monts.	Resti- gouche.	Mira- michi.	St. John River.	Lobster Hatchery, Shemogue.	Lobster Hatchery, Shippegan.	
	Fry.	Fry.	Fry.	Fry.	Fry.	Fry.	Fry.	Fry.	Fry.	Fry.	Fry.	Fry.	
1 1872	1,670,000												1
2 1874	350,000												2
3 1875	650,000												3
4 1876	700,000	8,000,000											4
5 1877	1,300,000	8,000,000											5
6 1878	2,605,000	20,000,000											6
7 1879	2,602,700	12,000,000											7
8 1880	1,923,000	13,500,000											8
9 1881	3,300,000	16,000,000											9
10 1882	4,841,000	14,000,000											10
11 1883	6,053,000	72,000,000											11
12 1884	8,800,000	37,000,000											12
13 1885	5,700,000	68,000,000											13
14 1886	6,451,000	57,000,000											14
15 1887	5,130,000	56,500,000											15
16 1888	8,076,000	56,000,000											16
17 1889	5,846,500	21,000,000											17
18 1890	7,736,000	52,000,000											18
19 1891	7,877,500	75,000,000											19
20 1892	4,823,000	44,500,000											20
21 1893	9,835,000	68,000,000											21
22 1894	6,000,000	47,000,000											22
23 1895	6,000,000	73,000,000											23
24 1896	5,200,000	61,000,000											24
25 1897	4,200,000	72,000,000											25
26 1898	4,325,000	71,000,000											26
27 1899	4,050,000	73,000,000											27
28 1900	5,175,000	90,000,000											28
29 1901	5,900,000	67,000,000											29
30 1902	650,000	100,000,000											30
31 1903	2,500,000	90,000,000											31
32 1904	1,475,000	75,000,000											32
	141,975,000	332,000,000	56,536,000	50,280,000	44,289,000	19,033,000	125,000	12,011,000	31,890,000	60,319,200	69,000,000	50,000,000	

FISH CULTURE.

STATEMENT showing the Places where and the Years in which the several Fish Hatcheries have been erected, &c. — *Continued*

Year.	NOVA SCOTIA.				P. E. Island.		BRITISH COLUMBIA.		MANITOBA.		Totals.	Number.
	Bedford.	Sydney.	Margaret.	Lobster Hatchery Bay View.	Lobster Hatchery Charlottetown.	Fraser River.	Granite Creek, Simooms.	Nimpoish River.	L. Lake Superior.	Saskatchewan.		
	Exp.	Exp.	Exp.	Exp.	Exp.	Exp.	Exp.	Exp.	Exp.	Exp.		
1868-73.											Exp.	
1 1874.											1,070,000	1
2 1875.											510,000	2
3 1876.	395,000										1,570,000	3
4 1877.	1,000,000										9,655,000	4
5 1878.	1,400,000										13,451,000	5
6 1879.	1,740,000										27,042,000	6
7 1880.	730,000										21,684,700	7
8 1881.	680,000										21,613,000	8
9 1882.	850,000	315,000									22,949,000	9
10 1883.	800,000	659,000									50,859,000	10
11 1884.	1,000,000	853,000									83,784,000	11
12 1885.	670,000	772,000									83,143,000	12
13 1886.	950,000	1,179,000									81,067,000	13
14 1887.	4,230,000	1,415,000									76,724,000	14
15 1888.	4,390,000	1,559,000									79,273,000	15
16 1889.	3,850,000	2,034,000									88,109,000	16
17 1890.	3,800,000	1,953,000									47,500,000	17
18 1891.	2,550,000	1,000,000									90,213,000	18
19 1892.	2,620,000	690,000									115,772,300	19
20 1893.	3,180,000										135,959,500	20
21 1894.	3,805,000	288,000									258,314,000	21
22 1895.	3,815,000	195,000									254,919,000	22
23 1896.	4,225,000	243,500									294,040,000	23
24 1897.	5,150,000	496,000									202,459,500	24
25 1898.	3,000,000										198,839,000	25
26 1899.	4,025,000										192,477,000	26
27 1900.	3,970,000										222,359,000	27
28 1901.	3,980,000										265,956,000	28
29 1902.	960,000		95,000								203,540,000	29
30 1903.	710,000		600,000								271,401,000	30
31 1904.	1,213,000		562,500								314,511,500	31
Totals.	70,058,000	13,652,500	1,257,500	1,614,300,000	66,145,000	114,246,800	14,700,500	92,507,800	106,450,000	165,500,000	4,178,874,700	

SESSIONAL PAPER No. 22

The preceding figures are, as already noted, exclusive of the black bass many thousands in number bred and reared in the department's bass ponds, Bay of Quinté. These fish were transplanted in the fall, and a number of lakes in Ontario and the province of Quebec were stocked with these healthy and vigorous young game fish.

The lobster ponds operated by Mr. H. E. Baker, of Gabarus, Cape Breton, under the department's auspices, were again very successful. The lobsters, according to the contract, were collected from the fishermen by Mr. Baker in his business as a lobster packer, excepting that he employed extra tug assistance and sailing smacks and special hands and selecting fine seed lobsters, that is female lobsters bearing eggs, these were carefully carried, not to the cannery, but to the reserve tidal ponds at Fourchie, C.B., and after the commencement of the close season were replaced in the open sea, so that they might incubate and hatch out their eggs under natural conditions. On July 22, the first batch of seed lobsters were liberated to the number of 24,800, and between July 30 and August 13, 31,820 more lobsters were set free in the sea, being scattered over the known breeding resorts of these valuable crustaceans. During their confinement in the ponds the lobsters were fed with herring and other food. Some mortality is of course unavoidable; but this was last year kept very low, but was slightly higher this year, as the report of the officer in charge on behalf of the department shows. Mr. H. C. V. LeVatte stated the mortality as follows:—

	1903.	1904.
May	2 $\frac{1}{4}$ per cent.	2 $\frac{1}{5}$ per cent.
June	3 $\frac{1}{8}$ “	3 $\frac{3}{4}$ “
July	4 “	5 $\frac{3}{4}$ “

The increased mortality in July this year was due to the extreme heat of the sun, and the only remedy was the removal of the lobsters, which were placed in crates and conveyed to deeper cooler water, where the death rate at once decreased and the sickly lobsters recovered. ‘The natural propagation of lobsters,’ says Mr. LeVatte in his report sent to me on December 31, ‘will no doubt materially increase the supply on this coast, and I consider Mr. Baker's scheme has proved a success.’ Of course the system adopted at Fourchie is a somewhat complicated one and can only be satisfactorily adopted where the skill and experience of trustworthy parties can be secured. Mr. Baker is a lobster packer of long and unusual experience, and in his hands a scheme involving the handling, transference in crates, planting in the tidal inclosures, feeding and care, and final retransplanting in the sea again can be carried out with a greater measure of success than in most localities. The department also authorized one of its officers to specially supervise the work and furnish proper reports of the progress of the operations of impounding and of replanting in the ocean. The system is so open to abuse that in many localities it could not possibly succeed so well as it does on the Cape Breton coast. Finally, I need not only repeat that the increasing results accomplished in the Dominion hatcheries are not only highly satisfactory in themselves, but they evidence an efficiency and a zealous interest on the part of the hatchery officers which is in the highest degree creditable. Mr. Cunningham rightly draws attention to the latter fact in his report, and the reports of the several officers, which are appended, furnish proof that increased efficiency is going hand in hand with the rapid growth in the extent of fish-breeding work in Canada. The words of the late Mr. Samuel Wilmot, published in the department's report over thirty years ago, are still applicable, or rather are more applicable than ever to the operations in the Dominion hatcheries, and with these words I may fitly conclude my present report:—

‘The operations and beneficial results attending this enterprise are being fully understood and appreciated by the people of the country, as shown in the general desire expressed by almost all classes of the community to give it a hearty support.

‘The increased interest evinced by the people and the press generally, has had the effect of inducing the legislature to aid the undertaking by continued grants from the public funds. Thus far the assistance has been of much service; but in order more fully to develop the great work of fish culture and place it in its proper position, as a means of advancing a new industry and producing wealth for the inhabitants of the Dominion,

4-5 EDWARD VII., A. 1905

a more liberal view should be taken, and increased pecuniary grants given to further the enterprise.

· Fish culture has advanced rapidly in the neighbouring republic : many of the states of the Union have taken hold of the work in good earnest, and have each appointed fishery commissioners. Several of the state legislatures have granted large sums of money to assist in carrying out a work which they consider will result in a great and lasting benefit to their country.

‘ As an evidence of the importance of this work to the Dominion, I might state that the fish-breeding establishment at Newcastle in Ontario has already attracted the attention of several of the fishery commissioners from the New England states of America, some of whom have visited it, not only with a view to inspect and report upon its adaptability as a public work to be introduced into their own country, but also to negotiate with your department for the procuring of salmon ova to supply in part the depleted waters of their own states with this valuable commercial fish.

‘ The immediate success attending my experiments, has been very satisfactory, and the future benefits arising from the distribution of young fish in various parts of the province cannot be otherwise than gratifying to your department, as well as to all people who would rejoice at seeing important fish abound once more in the rivers and streams, so recently almost barren. ’

I have the honour to be,

Your obedient servant,

EDWARD E. PRINCE,

Commissioner of Fisheries and General Inspector of Fisheries for Canada.

ANNEX A.

OTTAWA, December 31, 1904.

To Professor E. E. PRINCE,
Dominion Commissioner of Fisheries,
Ottawa.

SIR,—I beg to submit the following report on the work of the various hatcheries, included under the department's fish-breeding system, during the past year. I have personally visited and inspected a number of the hatcheries from Atlantic to Pacific as well as the sites of new hatcheries to be built or already in progress.

It is gratifying to report that this year has been the most successful in the history of the department. Reports have been received from different sections of successful fishing conducted in lakes where no game fish were to be found until after they had been stocked with fry from one of the various hatcheries. This has been particularly noticed in Lake Memphremagog, where sea salmon have been caught this fall, that were planted from the Magog hatchery, some five or six years ago. In Sharbot lake, a small supply of salmon fry were planted three years ago, and this season a few of these fish have been caught, thus showing that by judicious distribution the numerous lakes suitable to fish life can be successfully stocked.

During the past summer application was made for an exhibit of live fish and mounted specimens at the Toronto exhibition. The request was granted and the exhibit consisting of salmon trout, sea salmon, speckled trout and bass which were raised in Ontario hatcheries, besides the mounted specimens, and judging by the visitors, and their complimentary remarks, was greatly appreciated. In addition to the attraction it was considered, from an educational standpoint, a great benefit to the public by showing them something of the work done by this department. Whilst on this subject, I may say that exhibits of this kind should be encouraged at suitable places, as it is a very satisfactory means of proving to the public the great benefits to be derived from the artificial propagation of fish.

Two additional lobster hatcheries were successfully operated during the past season, one at Charlottetown, P. E. Island, and one at Shippegan, N. B.

In Quebec, C. H. Simpson, Esq., of St. Alexis des Monts, deeded to this department, free of charge, his private hatchery and about twenty acres of land as well as a number of retaining ponds. This hatchery is being used exclusively for the hatching of speckled and Marstoni trout. It is excellently located and will be a great benefit to this section of the country. This gentleman's generosity and the interest he takes in the work of this department for the propagation of fish is greatly appreciated.

The whitefish hatchery at Sandwich, was not as successful as in former years, owing to the fact that only a very small quantity of parent fish entered the Detroit river in the fall of 1902, consequently it was impossible to secure the usual number of eggs, but this fall the required quota has been secured and the usual success can be expected.

In British Columbia a new hatchery was built and put in operation which will be of great benefit to the Fraser waters. This hatchery is two hundred and twenty feet long by forty feet wide and will accommodate twenty-seven millions of eggs. A site has also been selected in this province at the junction of Owl and Poole creeks and arrangements are being made for the erection of a building suitable to the location and which will be in readiness for next season's work.

When it is considered that the hatcheries under the control of this department are scattered all over the Dominion and a great deal of the detail must be left to the

4-5 EDWARD VII., A. 1905

discretion of the respective officers in charge, the general success achieved at the various establishments is proof of the zeal and attention which these officers have given to the duties required of them.

From the numerous applications received from different parts of the Dominion asking for the building of new hatcheries it can be fairly assumed that those now in operation have the confidence of the general public, and in order to meet the demands, locations for new hatcheries are now being inquired into. This refers especially to the great lakes of Ontario, where it is expected a whitefish hatchery and a salmon trout hatchery will be in operation next season, and to the lobster industry of the maritime provinces, where the department is gradually increasing the number of lobster hatcheries.

During the past season experiments of retaining fry in ponds built for the purpose until they reach the age of from four to six months has been very successful, and at present the ponds in the province of Quebec contain about thirty thousand salmon trout which were hatched at Magog, and have now attained a good size and are in a very healthy condition. The same applies to the retaining pond connected with the Restigouche hatchery and which for the past two seasons has proved a great success.

There is no doubt that the question of retaining as many fry as possible until they are six months old is an important feature in the artificial breeding of fish, and it is recommended that retaining ponds be constructed at all hatcheries offering suitable facilities.

On the Bay of Quinté the department has in operation retaining ponds for the natural propagation of bass. The operations for the season were very successful. The young bass being distributed during the months of September and October and at that time had reached a growth of from three to four inches in length. The distribution was very satisfactory, as by close attention on the part of the officers in charge of the transfer of these bass the loss was reduced to a minimum.

It will be of interest to mention here that some whitefish fry from the Sandwich hatchery were placed in these ponds with the bass, and in the fall when the ponds were cleaned out some of these fish were caught and were found to have thrived and had grown to a length of four inches. This can be considered as a very satisfactory test of the beneficial results attained by the artificial breeding of whitefish. These fish are now on exhibition in the Ottawa hatchery as well as several hundreds of salmon trout fry which were hatched at the Newcastle hatchery last spring and are now five and a half inches long.

It is considered that these experiments are of great value to the department, not only proving the success of the department's operations, but also that great results can be attained by the construction of retaining ponds on a large scale.

With reference to the two shipments of black bass made to western waters in 1901 and 1902. Most of the fish taken out in 1902 were planted in the waters at Banff and reports are to hand that they are apparently doing well.

Success has also been achieved this season in securing a small quantity of land-locked salmon eggs which are now undergoing incubation in the Ottawa hatchery. A supply of gray trout eggs was also secured from Lake Memphremagog and are now laid down in the hatchery at Magog.

It will thus be seen that in order to meet the demands of the public, the department is extending its fish-breeding operations as quickly as circumstances will permit, and the results should be of great benefit to all concerned.

I am sir,

Your obedient servant,

F. H. CUNNINGHAM,
Superintendent of Fish Culture.

December 31, 1904.

ANNEX B.

1. FRASER RIVER HATCHERY, B.C.

NEW WESTMINSTER, B.C., December, 1904,

Prof. E. E. PRINCE,
 Dominion Commissioner of Fisheries,
 Ottawa.

SIR,—I have the honour to forward statement of the work of the various hatcheries in British Columbia during the season of 1903-1904, and of the progress of the work for the present season. These hatcheries consist of the original Fraser River hatchery, at Bon Accord; the Granite Creek hatchery, on Shushwap lake; the Skeena River hatchery, on the Lakelse tributary; and the privately owned hatchery, on the Nimpkish river, Vancouver island, operated under the supervision of the department by the British Columbia Packers' Association. To these has now to be added a large new hatchery on Harrison lake, the building of which was authorized by the Hon. Mr. Préfontaine when he was in the province in August, and which was sufficiently far advanced, before the egg-taking season was over, to be partially utilized this season. The department have also authorized the construction of a second large hatchery on the Birkenhead river, the main source of the Lillooet river flowing into Harrison lake, and a favourite spawning ground for sockeye salmon.

These new hatcheries are in addition to two hatcheries authorized for Rivers Inlet and the Skeena river, the former of which I understand from Mr. Williams, inspector for the northern district is expected to be in operation next season.

Fraser River Hatchery.

The season of 1903-1904 was the best we have had at this hatchery. The total number of salmon eggs received at the hatchery was:

Sockeye's	10,470,000
Humpbacks	80,000
Coho's	120,000
Steelheads	16,000

In addition to these we supplied from our camp at Morris creek 2,500,000 sockeye eggs to the Granite Creek hatchery where the local supply had failed.

Of these sockeye eggs, all except a little over a million from Trout creek and Harrison River rapids, were obtained from Morris creek. The half million obtained from Trout creek would have been considerably more, perhaps as much as two million had we made proper provision in time. We had also expected to get a considerable supply from Silver creek, but a heavy freshet washed out our fences before we had secured any fish. This creek is quite a large river, about half way up the lake on the east side, and is subject to heavy and rapid rises from rainstorms during the spawn taking season which makes it a difficult creek to fence securely.

Our first sockeye eggs were received at the hatchery on 26th September; our last, from Harrison River rapids, on 26th November.

The first shipment began to hatch out on the 3rd December, and the last on 12th February; the hatching of the whole being completed by the middle of March.

4-5 EDWARD VII., A. 1905

The average temperature of the water during the period of hatching was as follows :

September 26 to 30.....	49.1°
October.....	48.3°
November.....	33.5°
December.....	41.7°
January.....	39.7°
February.....	38.3°
March, 1 to 15.....	40.4°

When the fry were ready to distribute, the river was too low to get up to Harrison River rapids our usual point for distribution, and we took several shipments out to various streams in the Pitt Lake system.

The distribution was as follows :

Lillooet rivers (tributaries of Pitt river).....	700,000
River at head of Pitt lake.....	700,000
Silver creek, Pitt lake.....	700,000
Sauchenauch creek.....	60,000
Nanaimo river and lakes.....	100,000
Cowichan river.....	120,000
Squamish river.....	50,000
Creek at hatchery.....	150,000
Harrison River rapids (about).....	6,500,000

Of these the Lillooet rivers, north and south, and the river at the head of Pitt lake are used by the sockeye as spawning grounds, Silver creek is used by other varieties but not by the sockeye. Sauchenauch creek is near the entrance to Pender Harbour on the Sechelt Peninsula, and is largely frequented by sockeyes, smaller, however, than the average size. The Indians have a tradition that they were not indigenous there but were introduced many years ago by their ancestors. This is the second planting in this creek. For Nanaimo river and lakes, this is the third planting and as the work done on the falls of Nanaimo river enables salmon to get up into the lakes without difficulty we should soon see whether the planting of the fry there has been successful in introducing the sockeye to utilize this as a spawning ground. In Squamish river where we have now made two plantings it may turn out that the water is too cold for the successful introduction of the sockeye, though other varieties frequent this stream.

The roads were so bad, being still blocked with snow, when we made our first shipment to Nanaimo river that we could not get the fry so far up the river as we had intended, so a second shipment was made later in the season. In our first planting in the Cowichan river we lost a number of the fry from the water getting too warm in crossing the gulf, and profited by the experience, to take a supply of ice with us in future which effectually provided against further loss from this cause.

Besides the salmon eggs mentioned above, we secured a large number of trout eggs with a view to stocking various sporting waters on Vancouver island. We lost, however, a great many of these, the fry when hatched out seemed to be weak and died in large numbers before they were sufficiently advanced to be planted out. They were distributed as follows :—

Shawnigan lake.....	50,000
Sooke lake.....	20,000
Highland lakes.....	10,000
Langford lakes.....	4,000
	— — —
	84,000

For the present season we secured for this hatchery—

Sockeye.....	8,650,000
Spring salmon.....	49,000
Cohoe, about.....	2,000,000

SESSIONAL PAPER No. 22

Of the sockeye eggs about 2,000,000 when eyed were reshipped to the new hatchery at Harrison lake and 4,000,000 to the Granite Creek hatchery where the local supply had again failed. Having thus room to spare in the troughs I made arrangements to secure coho eggs to fill up and we are still getting a few of these. As they are now getting scarce, however, I have arranged to close up the two camps I had established, one at Tynehead on the headwaters of the Serpentine river and the other on a small tributary of the Nikomekl near its head. Had I anticipated having so much spare room in the troughs I could by making arrangements in time have easily secured coho eggs to the full capacity of the hatchery.

As the new hatchery at Harrison lake will in future be able to handle all the eggs from Morris creek and the other creeks on Harrison lake, on which we have hitherto depended for a supply for Bon Accord hatchery, it will be necessary to look to other sources in future. With this difficulty in view I had camps put in on the river running into Pitt lake at the head and also on the north and south Lillooet rivers emptying into the Pitt river. We were too late in getting these camps in to get much good from them this season but from what we saw I am satisfied that the former of these will be available to a large extent for supplying the hatchery. There were large numbers of fish observed but they were nearly all spawned out when we got there. This stream, as well as the two Lillooet rivers, is of considerable size and will be a difficult and expensive stream to fence. They are all subject to heavy and rapid freshets, and are also likely to be used for driving logs which may give us a good deal of trouble.

While I do not think there were as many fish in the Harrison lake spawning grounds as there were last year, yet, had we had a normal season, I think we could have secured as many eggs. Our actual take, however, was seriously affected by the low water in the spawning streams, caused by the unusually dry season. This prevented the fish from entering the streams to spawn, and many upon which we had been counting seem to have spawned outside before the rains had raised the streams sufficiently for them. This theory is confirmed by what was observed at Trout creek, where the new hatchery is situated. There we did not get more than one-third of the eggs we had counted on, and when the rains did come and the fish entered the traps, it was found that they were all spawned out.

I have the honour to be, sir,
Your obedient servant,

C. B. SWORD,
Inspector of Fisheries.

2. GRANITE CREEK HATCHERY. SHUSWAP LAKE, B.C.

To Professor E. E. PRINCE,
Dominion Commissioner of Fisheries,
Ottawa.

SIR,—During the season of 1903-04, the total number of salmon eggs handled at the hatchery was 3,395,000. Of these, 3,270,000 were sockeyes, 770,000 were from Scotch creek, Shuswap lake, and the balance, 2,500,000, shipped up from Morris creek, Harrison river. The balance was made up of 125,000 cohoes eggs taken at the creek at the hatchery. The first of these eggs were taken at Scotch creek on August 15; the run of cohoes lasting into January, in which month 15,000 eggs were taken.

The mean temperature of the water during the period of hatching was 44°; the loss from bad eggs was about 10 per cent; all of the fry were released at the hatchery, 3,060,000 being planted.

4-5 EDWARD VII., A. 1905

Fourteen thousand fry hatched out from eggs taken at Canoe and Granite creeks were placed out in Skimiken lake in June, 1904.

In accordance with former correspondence on the subject, I took Mr. Mitchell, foreman at the hatchery, down with me to the Boundary country with a view to securing trout eggs and transplanting them to such lakes and streams as were barren of fish. Our success was not very satisfactory, but Mr. Mitchell secured a total of 3,000 eyed trout eggs from James creek, the outlet of James lake, which were planted in Long lake near Greenwood. This lack of success was mainly owing to my having been misinformed as to the season when trout eggs could be obtained, most of the trout we had counted on getting, having been spawned out before we got on the ground. If I can arrange matters, I will have Mr. Mitchell make another attempt a little earlier next season.

For the present season we have 4,679,000 salmon eggs in the hatchery ; 490,000 of these are cohoes, obtained as follows :—

Scotch creek.....	189,000
Granite creek.....	7,000
Salmon river.....	294,000

The balance, 4,189,000, are sockeyes, of which 4,000,000 were shipped up from the Bon Accord hatchery in an eyed condition, and the balance, 189,000, obtained from Scotch creek.

It will be seen that the number of sockeye eggs obtained locally is much less even than last year : 189,000 against 770,000 in 1903.

The annual close season, from August 25 to September 15, re-established this year, has not been of any service so far as increasing the number of fish that reach the spawning beds on the upper reaches of the river.

The provincial hatchery at Seton lake has had the same experience as our hatchery at Granite creek, their take of sockeye eggs this year being a trifle under 1,000,000 against 2,000,000 secured last year.

I have the honour to remain, sir,
Your obedient servant,

C. B. SWORD,
Inspector of Fisheries.

3. LAKE LAKELSE HATCHERY, SKEENA RIVER, B.C.

Prof. E. E. PRINCE,
Dominion Commissioner of Fisheries,
Ottawa.

SIR,—My last report informed you of the dam for supplying water to this hatchery having again given way and the consequent necessity of liberating the hatched fish and planting out the eyed eggs then in the hatchery, these together amounting to close on 4,000,000.

Mr. Keefer, engineer in charge of Dominion public works here, having gone up and examined the ground, decided that a very substantial dam would be required, and gave a contract to Mr. P. Herman, of Port Essington, to build same according to plans which he furnished. This was completed at a cost of \$5,000 in time for this season's work, and my latest information from Mr. Whitwell, the officer in charge, dated November 1, reports the dam as having withstood the test of some severe freshets and being in good condition.

SESSIONAL PAPER No. 22

He reports having filled up his troughs on September 19, having then 4,120,000 good eggs.

His first spawning was made on August 22, and he is very sanguine of having a good output this year.

The inaccessibility of this hatchery is a great drawback, and increases the cost of operation very materially, but it is very doubtful whether any better site sufficiently near to good spawning grounds could be obtained. At the same time, should the department decide to provide increased hatchery accommodation for this river, it might be possible to have the first eggs taken, eyed at this hatchery, and shipped to a hatchery in a more accessible situation, to be hatched out there, before canoe-travel by the Lakelse river was stopped by the cold weather. In such case the later-taken eggs could be cared for at the present hatchery

I have the honour to remain, sir

Your obedient servant,

C. B. SWORD.

Inspector of Fisheries.

4. HARRISON LAKE HATCHERY, B.C.

HARRISON HOT SPRINGS, B.C.,

November 4, 1904.

Prof. E. E. PRINCE,

Dominion Commissioner of Fisheries,
Ottawa.

SIR,—I have the honour to report that the water was turned into this hatchery on Saturday morning October 29, this being less than eight weeks from commencement of active operations on the site.

The dam in the creek is now being built, the pipe line in the meantime connecting with creek lower down, which affords all the water required for present needs. The wooden pipe being used promises to give every satisfaction.

Mr. Forrester expects to be able to dispense with the greater part of his crew of carpenters by the 12th or 15th inst., by which time, weather permitting, the finishing of hatchery, erection of cottage and small building for water power and workshop, will be completed. When the newly varnished troughs can safely receive the ova, I propose moving the supply on hand from temporary quarters into the hatchery.

On November 1st, the Bon Accord staff finished collecting ova at Morris creek, since which time the camp there has been kept up by this hatchery. There is not much prospect for many more sockeyes this year, but we are getting a moderate supply of spring salmon, and the cohoes are now beginning to appear in the creeks. We have now about 1,250,000 eggs on hand, and I will be disappointed if we do not make the number $2\frac{1}{2}$ or 3 millions. In addition I would be glad if arrangements can be made to have as many more from Bon Accord of eyed sockeye eggs for which I have abundance of room here. In this connection I would point out the advantage of transporting these eggs here instead of sending up the fry later. The distribution can be made to better advantage from this hatchery than by following the usual practice of putting them out at the foot of the rapids in Harrison river, and it would only be a fraction of the usual expense of transport, and can be carried out with less loss.

I have the honour to be, sir,

Yours respectfully,

THOS. ROBINSON,

Officer in Charge.

5. NIMPKISH HATCHERY.

(Owned and operated by the Alert Bay, Canning Co. B. C., Packer's Association.)

Prof. EDW. E. PRINCE,
Commissioner of Fisheries,
Ottawa.

SIR,—This hatchery had been burned down and was replaced by a building 55x20, with a house 40x18 for men's quarters, &c. There are in it 36 troughs carrying 200 baskets, and it is fed by an iron pipe 5 inches wide at the intake, reduced to 4 inches at the discharge. Mr. R. C. Bucknall, who is now in charge of this hatchery, reports as regards the operations for the sea on of 1903-04:—

'We commenced taking spawn on October 6, 1903, and finished on October 24, having secured 2,640,000 sockeye eggs, all we could handle in the hatchery. We liberated 2,496,000 healthy fry in the beginning of April this year (1904).'

It will be seen that this is an increase of 1,000,000 eggs over the capacity of the former hatchery which was burned. For the present season Mr. Bucknall reports that he has secured 3,050,000 eggs having begun taking spawn on October 12 and finished on November 1.

HARRISON LAKE HATCHERY.

This hatchery, for the building of which the Hon. Mr. Préfontaine gave orders when in the province, in August, is now practically completed. Its dimensions are 220 feet by 40 feet, and without undue crowding 45,000,000 ova can easily be handled in it, though of course in season when this number cannot be obtained the baskets will not be filled up to this extent. The building is primed on the inside and primed and one coat of paint on the outside; the finishing coat of paint, it was thought better to leave over till next year.

About 40 troughs or 25 per cent of the whole are in, and the material for the others is on hand, and can be put together during the winter in time for next season's work. The mess house and house for the officer in charge are well advanced towards completion, and while of course there will be a great deal to do to the grounds for some time yet, the hatchery is now in condition at a fortnight's notice to take care of eggs to its full capacity. The pipes are all laid for supplying the dynamo for furnishing electric light and fire protection service, the buildings are all wired and the dynamo is expected daily. The permanent connection with the dam will be made as soon as the creek goes down.

At present there are 6½ million of salmon eggs of different kinds being treated in the hatchery.

Mr. Thos. Robinson who was appointed officer in charge and has been in this position for the last two months, will make a more detailed report.

Proposed New Hatcheries.

Having been informed of the intention of the department to put up a second hatchery of large capacity, the only site I knew of where there seemed a reasonable prospect of securing a sufficient supply of eggs in all seasons, was on the Birkenhead river, locally known as Poole creek. This river is the main feeder of Lillooet lake, which discharges through the Lillooet river into Harrison lake, at its head, near Douglas.

When the people of Washington State had in view, (could the sanction of the Dominion government be obtained), the artificial propagation of sockeye salmon by means of hatcheries at the spawning grounds in British Columbia, this was the site finally selected as most suitable.

Mr. Crawford, the Washington State Superintendent of Hatcheries, came over in 1902 with this object in view, and after visiting the Shuswap lake streams and this

SESSIONAL PAPER No. 22

stream, felt convinced that the latter was much more likely to furnish the necessary supply of eggs. He visited the site again in 1903, and expressed himself as still better satisfied with it.

I arranged that Mr. Robinson, then my assistant, should visit the locality during the spawning season this year and judge of its suitability for a hatchery of large capacity. Mr. Cunningham, Superintendent of Fish Culture for the Dominion, being in the province at the time was fortunately able to accompany him. The reports of these gentlemen, with which you have already been furnished, endorsed in the most important particulars Mr. Crawford's views as to the suitability of this site. The department having since sanctioned the work, I have made arrangements to have the necessary lumber cut on the ground and have no doubt we will have this hatchery, 150 feet by 40 feet, ready for operation next season.

Besides arranging to have an examination made of the suitability of Birkenhead river or Poole creek for a hatchery, I had Mr. Roxburgh, during the spawning season, visit the Nicola lake and the North Thompson streams, in both of which numbers of sockeyes were reported to have found spawning ground in former years. His report, however, was that very few were there this year, and that if hatcheries were established the eggs would require to be, in poor years like this, brought from somewhere else.

While from all the evidence obtained there seems to be little doubt that sufficient eggs can be obtained at Poole creek to supply the new hatchery, which will have a capacity of 30,000,000 ova it may be a question whether the full benefit of the hatchery operations would be obtained by releasing the fry there. It seems at least possible, from the reports of the numbers of fish spawning there, that the natural propagation may be sufficient for the capacity of the stream and that this may be exceeded should a large addition be made from artificial propagation.

From the remoteness and comparative inaccessibility of these spawning beds there would no doubt be considerable difficulty in getting eggs out to supply other hatcheries less favourably situated in regard to a supply. At the same time, if found at all practicable, the advantage to be gained would justify a considerable expenditure. Some of the streams mentioned in Mr. Roxburgh's report on the North Thompson and Nicola water systems, as being now completely denuded of fish, are reputed to have been formerly favourite spawning grounds for the sockeye. Could the eggs be obtained for them, small hatcheries of a capacity of from 2,000,000 to 4,000,000 ova each might be very effective: in re-establishing these streams as valuable spawning ground. This of course is based on the assumption that the general theory of salmon returning to spawn to the streams where they have been hatched is at least to some extent correct. These hatcheries could be put up in the cheapest fashion, and, if the eggs were supplied in an eyed condition, could probably be operated at comparatively little expense. Not having the expense of collection to provide for the services of two men for three or four months in the year would probably be sufficient.

The Clayoquot Canning Co., at Clayoquot Sound, on the west coast of Vancouver Island, hold a lease from the department of a small area near the mouth of the Kennedy river for which they pay an annual rental of \$150. In lieu of this rental they would be willing to equip and operate a salmon hatchery of such capacity as the department might consider suitable.

At Alberni, at the head of Barclay Sound, the Indians, through their agent, have made a request for the establishment of a hatchery to conserve the supply of fish which they fear may be affected by the operations of the cannery belonging to the Alberni Packing Company. This company would probably be willing, if they could receive an exclusive lease, so that they would reap the benefits of the expenditure, to establish and operate a hatchery.

In both of these cases it is probable that were hatcheries established, the effect would naturally be more marked, than in the case of large rivers like the Fraser, where other unknown causes might be much more important in their influence on the supply in special years.

4-5 EDWARD VII., A. 1905

Whether, by the department direct, or by the canning companies to be more benefited, the establishment of hatcheries in these localities is of sufficient importance to justify the department giving this matter careful consideration.

I have the honour to remain, sir,
Your obedient servant,

C. B. SWORD,
Inspector of Fisheries.

6. BEDFORD HATCHERY, NOVA SCOTIA.

BEDFORD, N. S., December 1, 1904.

Professor E. E. PRINCE,
Dominion Commissioner of Fisheries,
Ottawa.

SIR,—I beg to submit my annual report of operations at the Bedford salmon hatchery, for the past year.

On November 4 last, I went to St. John, N. B., and obtained from the Carleton retaining pond about 1,000,000 eggs, which are laid in the hatchery troughs and appear to be in splendid condition.

The distribution of fry during May and June last was conducted without loss and were planted in splendid condition in the following streams:—

Salmon.

Herbert and Meander rivers, Hants Co., N. S.	60,000
Petite Rivière, Lunenburg Co., N. S.	60,000
La Have river, “ “	60 000
Salter “ “ “	60,000
Hoosiers “ Halifax “	65,000
Salmon “ “ “	60,000
Quoddy “ “ “	60,000
Sackville “ “ “	65,000
Pennant “ “ “	65,000
Nine Mile “ “ “	60,000
Gaspereaux “ King’s “	60,000
Cornwallis “ “ “	60,000
Annapolis “ Annapolis “	60,000
Bear “ “ “	60,000
Nictaux “ “ “	60,000
Bridgetown lake “ “	60,000
Tusket river, Yarmouth “	60,000
Cole harbour river, Guysboro Co., N. S.	60,000
Salmon river “ “	60,000
Total	1,200,000

Speckled Trout.

Maitland stream, Annapolis Co., N. S.	9,000
Mount Henly lake “ “	4,000
Total	13,000

SESSIONAL PAPER No. 22

At North Mountain, Annapolis county, I obtained, last month, 100,000 speckled trout eggs, which are looking healthy.

The hatchery is in a good state of repair, some new gates and fencing may be equired next summer, but the cost will be trifling.

I am, sir,
Your obedient rervant.

ALFRED OGDEN.

7. BAY VIEW LOBSTER HATCHERY, N.S.

PICTOU, N. S. Sept. 25, 1904.

Prof. E. E. PRINCE,
Dominion Commissioner of Fisheries,
Ottawa.

SIR,—I have the honour herewith to submit my annual report upon telobste hatching operations at Bay View hatchery for the year 1904.

I commenced operations on April 26 and closed the hatchery on July 9, making a run of 74 days. We collected 350 jars of eggs.

The hatchery's full capacity is 320 jars, but by doubling a part of the incubation battery when they were hatching, we found room for the other 30 jars.

I distributed 175,000,000 young lobsters in the following places:—

Between Pictou and mainland.....	23,222,000
Merigomish.....	23,222,000
Little harbour.....	15,555,000
Gull Rock and Big Entrance.....	31,000,000
Caribou harbour.....	23,222,000
Round Big Island Caribou.....	23,222,000
Entrance to Pictou rivers.....	11,667,000
Cole reef.....	7,778,000
McDonald's reef.....	7,778,000
Entrance to Pictou harbour.....	7,778,000

In the opinion of qualified persons they were the finest supply of eggs in the hatchery for many seasons.

Under the increased work done this year, the hatchery has been run with a special view of economy and efficiency.

The pump which we had repaired last fall gave good satisfaction, and I used less water and less coal, and better work was accomplished.

I may add that spawn was very scarce at the beginning of the season, but we had after all the great success recorded above.

I have the honour to be, sir,
Your obedient servant,

EDWARD DOHERTY,
Officer in Charge.

8. MARGAREE HATCHERY, NOVA SCOTIA.

N. E. MARGAREE, N. S., November 30, 1904.

Professor E. E. PRINCE,
Dominion Commissioner of Fisheries,
Ottawa.

SIR,—As officer in charge of the Margaree hatchery I have the honour to submit my annual report for the season of 1904.

In obedience to your instructions, about November 1, 1903, I proceeded to Carleton retaining pond, N. B., for the ova 750,000, apportioned to this hatchery. I reached home with them on Nov. 6. Considering the long distance carried, the large number of transfers, in transit, and before reaching the hatchery the long drive of thirty-five miles over a very rough road, the ova were placed in the incubation troughs in fair condition. Nothing but vigilant supervision by me at every stage of the journey could ensure such excellent results. The prospect for a large output of fry was promising, until on November 17, a terrific freshet took place. During its continuance we—myself and assistant—stood on watch, as it did not appear the pipes could stand the severe strain they were being subjected to by the flood of waters. When the water receded none could reach the supply tank, as the terra-cotta pipes above stop-house were uncovered, thrown out of position, and broken in many places by the violence of the water, and heavy trees that were uprooted in the forest above and were descending in the flood. In last years report I gave a detailed account of this accident. Therein I stated, that instead of removing the ova to the nearest spawning grounds, I let them remain in the troughs, and I carried water to them several times a day, and as often by night, keeping the temperature of the house uniform. Fortunately the weather was cold at the time—they were kept in condition, until the pipes were mended and water coming to hatchery about two weeks later. The water was poured into the troughs from a height, and as often as possible agitated, this to admit air which is so essential to the healthy development of the embryo. As was anticipated the mortality was higher than usual, but when 75 per cent of such ova developed into healthy vigouros fry, we have just cause to feel satisfied.

The resultant fry, 562,500, were liberated into the following streams:—

Distribution of Fry.

N. E. Margaree river, Inverness Co.....	25,000
Rossville river “ “	40,000
Hatchery brook “ “	50,000
Sugar loaf “ “	25,000
Big Interval “ “	25,000
S. W. Margaree “ “	25,000
Cheticamp, Little river “	119,500
Middle river, Victoria Co	25,000
Baddock river “	10,000
North River, St. Ann’s, N. Victoria Co	74,000
South River, Ingonish “	75,000
Clyburn river “ “	74,000
Total	562,000

SESSIONAL PAPER No. 22

The shipment for North Victoria rivers was delayed until the yolk-sac was about absorbed. These rivers are a long distance from hatchery, and not easily reached. I was, therefore, fearful of results. Inspector Bertram met me at Baddeck, with the steam tug *Iona*, Capt. Rudderham, of North Sydney. He accompanied me to the rivers and rendered efficient service. When we reached the rivers the fry were almost as active as when they left the hatchery. These results were accomplished in travelling by night, having no delay en route, and in having a liberal supply of ice by which the temperature of the water in cans was kept as uniform as possible. I made constant use of the thermometer. Frank J. D. Barnjum, Esq., President of North River Lumber Co., and another gentleman connected with said company, accompanied us to the Ingonish rivers and witnessed with us the liberation of the fry, and the result to them was most pleasing.

Repairs.

During the summer months I had the supply tank, troughs and trays, varnished, and as instructed by Inspector Bertram, I had a good fence erected around hatchery grounds, and considerable work was performed up brook above stop-house in protecting pipes in such a manner as to render them as safe as possible against freshets. Last week a very severe freshet took place, and I am pleased to report that the pipes were not affected by it in the least.

General Remarks.

I hope to be able to carry the allotment of ova,—1,072,000—that I recently brought from Carleton pond, and laid down in troughs in fair condition, carried through without accident. Owing to the railway bridge being down near Stellarton, N.S., I had more than usual trouble at that point in preventing my boxes of ova from being subjected to rough treatment. We are at present having dead ones removed. Next summer I will have a large number of fry to liberate into our island streams.

Applications for Fry.

Already applications are being made for fry for streams that I fear are not adapted for salmon fry. The officer who is deeply interested in his work and who gives the subject of 'Fish Culture,' close study, I think in a matter of so much importance, should have a free hand. After bringing fry through with so much hard labour and expense, it appears too bad to throw them away. It is all right to liberate salmon fry into a salmon river, but it looks like deliberate waste, as, indeed, it is, to place them into streams that salmon was never known to enter.

Remarks Re Margaree River.

Local historians inform us that our first settlers found the Margaree river literally filled with salmon. I am satisfied that with proper and intelligent effort to increase the production of fry in this hatchery, a liberal restocking of this river would follow. With the nets removed out of its tidal waters or restrictions placed on their use, the greater respect for the fishery laws and their vigorous enforcement will also ensure its productiveness.

All of which is respectfully submitted.

I am, sir, your obedient servant,

A. G. CARMICHAEL.

9. ST. JOHN RIVER HATCHERY, NEW BRUNSWICK.

GRAND FALLS, N. B., December 24, 1904.

Professor EDWARD E. PRINCE,
Dominion Commissioner of Fisheries,
Ottawa.

SIR,—I respectfully request to submit to you my annual report of the work transacted at the St. John River hatchery, under my supervision during the present year 1904.

I may here preface my remarks by stating, that owing to the very cold weather of last winter, and consequently the low temperature of the water in the hatchery until very late last spring, the result was favourable to the young fry as they hatched out strong, lively and healthy, whereas if the temperature were high it would induce to a greater or less degree premature hatching, and the young fry are generally weak and subject to quite a loss before they can be planted out during the summer.

It may not be necessary for me to again refer to the quantity of eggs laid down in the house last season, as the number was stated in my last report. the ova did fairly well during the winter, and hatched out a good percentage. The fry were all successfully distributed in the spring in the several rivers and waters suggested, and officially confirmed as follows, viz. :—

St. Croix riv., boundary between New Brunswick and Maine	192,000
Plaster Rock, Tobique river, Victoria county	192,000
Sálmon river, Victoria county	108,000
Beechwood pond, Carleton county	36,000
Webska lake, Victoria	24,000
Little river,	18,000
Paterson lake,	12,000
Private lake, (George Murphy), Victoria county	12,000
Main St. John river	250,000
Rapide des Femmes brook near the hatchery	65,000
Total distribution	909,000

I am pleased to inform you that the planting of the young fry was successfully accomplished with comparative little loss of fish. As soon as the planting of the fish was completed, we turned our attention to the cleaning up and renovating of the interior of the hatchery, varnishing the trays, troughs and the main tank, &c., so as to be prepared for the next season's work.

Some repairs had to be made to the main tank this fall as it was leaking badly, and repairs had to be made on the waste water aqueduct that runs underneath the house, especially about the foot of penstock. On October 19, we sent seven empty cases for ova and about 280 trays in care I. F. Belyea, freight prepaid, so that there would be no delay when they would be wanted. On the 31st, my assistant went to St. John, in compliance with Mr. Mowat's telegram, to get our quota of the eggs ; we received seven cases containing about 960,000 eggs, they arrived at the hatchery in good condition and are looking very well at present, but is rather soon to give a decided opinion how they will do during the long winter. The prospects are good that we will have hatched out a fair percentage next spring if nothing serious should happen.

SESSIONAL PAPER No. 22

Repairs.

Many repairs had to be made on the main dam the present fall, as it was leaking pretty badly. This dam is built on the ledge of rock at the head of the falls, and therefore the spiling cannot be driven down to a good depth, and strong eddy that runs around the dam washes away the clay and gravel that is placed around the foot of the spiling and plank on the face of the dam.

Several repairs had to be done on the main tank in the hatching-room, as it was also leaking considerably, as it is very old. I would suggest that it would be well to have it all lined with zinc inside, next summer, after the young fish are all out, if such were done carefully it would stop the leak for some time to come. The waste water aqueduct underneath the hatchery had also to be repaired especially about the foot of the penstock with zinc.

I have been informed on very good authority, that salmon were very plentiful in the St. John river the past summer, and the poachers had a successful time of it as the waters are not sufficiently looked after at least in this county.

All of the foregoing is most respectfully submitted.

I have the honour to be, sir,
Your obedient servant,

CHAS. McCLUSKY, SR.,
Officer in Charge.

10. MIRAMICHI HATCHERY, N.B.

SOUTH Esk, December 23, 1904.

Prof. E. E. PRINCE,
Dominion Commissioner of Fisheries,
Ottawa.

SIR,—I beg to submit my report on the operations at this hatchery during the year 1904.

Reference to my last annual report shows that the number of ova in this hatchery in the autumn of 1903 was 1,530,000, collected from the native Miramichi salmon, and 250,000 obtained at Carleton pond, making a total of 1,780,000.

About May 1, just previous to hatching, 200,000 of the Miramichi ova were transferred to the Restigouche hatchery. Deducting this number, and also 80 000 dead and decayed eggs, which were removed during incubation from the total number above stated, it will be seen that the number of fry remaining for distribution was 1,500,000. These fry were planted in splendid condition under the personal supervision of the assistant officer or myself in the following waters, viz. :—

North-west Miramichi river.....	250,000	St. John fry.
“ “	250,000	Miramichi fry.
Main South-west Miramichi river.....	250,000	“
Little South-west “	400,000	“
Sevogle river.....	100,000	“
Renous river	100,000	“
Millstream	20,000	“
Tabusintac river	75,000	“
Pleasant lake, King's County.....	40,000	“
Stewart's brook.....	10,000	“
Total.....	1,500,000	

4-5 EDWARD VII., A. 1905

Several applications for fry for other streams were received too late in the season to be filled this year.

The planting of fry in Pleasant lake is showing good results. The gentlemen controlling the lake report good fishing and excellent sport. It is very interesting to note the growth of these land-locked salmon. Last year, the average length was about 9 inches. This year they are about 12 inches, and specimens have been obtained $13\frac{1}{2}$ and 14 inches in length. They seem to be very plentiful in the lake, which shows that a very large percentage of the 25,000 fry planted there, some years ago, must have attained the present size.

Improvements.

There has always been considerable difficulty experienced in preventing the young fry from becoming crowded in the hatching troughs during the months of June and July, and it was only by the greatest care and attention that loss from this cause could be avoided.

In order to overcome this difficulty, it was thought advisable to provide some means, whereby the crowded condition of the troughs after hatching time, might be relieved. Two suggestions were made, one to erect tanks outside the main building, and another to use the deep tray, placed in the breeding trough with a limited number of fry in each. The latter plan was adopted, and found to suit the requirements of the case very satisfactorily. Two hundred of these trays were purchased and used during the past season. They are undoubtedly the best contrivance yet introduced here, for carrying large numbers of young fry, and with two hundred more, the carrying capacity of this hatchery will be considerably increased.

During the summer season, several improvements were made about the hatchery, and the dams of the supply and retaining ponds were overhauled and repaired where necessary. The usual work of dredging the retaining pond, varnishing the hatching trays and troughs, repairing the pontoons for carrying parent fish, and other work was efficiently carried out. The inside of the hatching room was given a fresh coat of paint, and the new fences about the premises, which were erected last year, were also painted. The hatchery and appliances are now in good condition and the buildings and grounds are being improved every year.

Collection of Parent Fish and Ova.

The method of procuring the supply of ova for this hatchery is strongly objected to by several prominent fishermen and anglers, and in order to overcome this objection, provision should be made to procure the required supply, during the months of June and July. This matter should receive immediate attention, and arrangements be made for taking the fish next year, during the early part of the season. A site for a retaining pond, and the required stands of nets should be selected and arranged for during the present winter, in order that in future, the supply of ova may be gathered from the earliest runs of salmon entering the river.

Preparations for this branch of the work were commenced this year about September 1. The nets and other apparatus being put in readiness, netting began on September 14, and continued until October 25. The fish were not nearly so plentiful in the pools as last season, owing to several freshets, which came on while the nets were in operation, allowing the fish to escape to the upper parts of the river, beyond our reach. The fish were of a much larger average size than usually taken in this river and were in splendid condition. The total number obtained was 226, consisting of 156 females and 70 males. From these fish 1,470,000 ova were collected and placed in the hatchery. These ova are at present in good condition, and a large yield of fry may be expected for next season's output.

I am, sir,

Your obedient servant,

ISAAC SHEASGREEN.

11. RESTIGOUCHE HATCHERY.

FLAT LANDS, NEAR CAMPBELLTON, N. B., Dec. 3, 1904.

Professor E. E. PRINCE,
 Dominion Commissioner of Fisheries,
 Ottawa.

SIR,—I beg to transmit herewith a detailed report of all matters in connection with the management of the Restigouche hatchery during the past year. As previously reported, 2,500,000 eggs were deposited in the hatchery in the autumn of 1903, and which was further supplemented by an assignment of 250,000 from the Miramichi hatchery in March, and 35,000 salmon trout eggs from the Ottawa hatchery in April; great success attended the hatching and distribution of such a large number of eggs and fry, the loss throughout did not reach ten per cent. The semi-hatched eggs, fry and fingerling fish were distributed and liberated in the following rivers, lakes and streams, namely :—

Shipped to Newfoundland, semi-hatched eggs.....	50,000
Restigouche river above hatchery.. .. .	1,425,000
Upsalquitch river.....	400,000
Matapedia river and lake.....	450,000
Lake St. Modeste and Grand Fourche, River du Loup...	60,000
Kouchibouguac river.....	35,000
Scoudouc.....	30,000
Held over summer in retaining pond, and tanks at hatchery	75,000
Total.....	2,525,000

Distribution of Salmon Trout.

Lake Grand Fouche, River du Loup.....	10,000
Scoudouc river, Shediac.....	10,000
Lake Matapedia.....	10,000
Campbellton Club lake.....	2,000
Grand total of all kinds.....	2,575,000

In addition to the above distribution of fry, 50,000 of the six months old fingerling fish which were held over for the summer at the pond and in tanks were transferred to Sydney, C. B., on October 12, and liberated in the river and lakes there in very fine condition. It will be seen that many of the fry were conveyed in cans long distances over the railways which is a hazardous work, particularly in hot weather, when ice must be freely used in order to supply oxygen and maintain a uniform temperature. A fish car properly equipped with tanks of running water in which to transfer the fry would obviate the use of ice and minimize the risk of loss, and guarantee the healthy condition of the fry.

Government Nets at Tide Head.

The same nets as were operated last year, namely one government net and W. G. McBeath's licensed net were again used this year for the capture of parent fish. These nets were set out the 1st of June, and captured 200 fine fish which were seined from the pond on the 20th of October, when the work of collecting the eggs began and continued until the first week in November: W. A. Mowat, the caretaker, assumed charge during my absence at the Carleton pond, St. John, and collected 1,500,000 eggs. These were further supplemented by a quota of 1,256,000 which I brought with me from the Carleton pond and which will likely be apportioned among the P. E. Island, Ottawa and Magog hatcheries.

A Salt-Water Pond for Restigouche Hatchery.

A report has already been forwarded to your department regarding the site and suitability of this pond, and in order to insure a full supply of parent fish, natives of the river, the great need of it must be patent to your department. I trust action will be taken immediately.

Repairs to Hatchery.

360 new zinc trays were furnished the hatchery last season. This tray while not altogether a new invention has been improved upon and made perfect and fills all the requirements of a nursery tray; it is 20 inches long by 5 inches deep, made entirely of perforated zinc, will last for ages. An up and down motion of the tray, instead of washing cleanses the eggs. The tray extends above the surface of the water in the troughs and when the fry burst the shell, which is quite a critical time, they cannot escape from the tray which prevents the over-crowding and sometimes smothering in the troughs; the moving mass of tiny fish assisted by the current drives all the sediment and decayed matter through the tray.

The hatchery walls outside were doubled, papered, clapboarded and painted for warmth. All trays, troughs and plant were varnished and prepared for the fall's operations.

Retaining Pond at Hatchery.

The usual number of fry were placed in the pond and tanks on July 1 and fed several times per day during the summer. Some difficulty is experienced in providing the proper kind of food for the fry; liver has been generally used, but there is difficulty in pulverising and grinding it sufficiently fine so as not to injure the tiny fish. Another season, I hope to experiment and use the eggs of smelts and herrings for food which would be more natural and nourishing and no fibrous substance to injure the fry. Large quantities of smelt and herring eggs can be gathered in May at a trifling cost and preserved by freezing. In addition to the 50,000 taken to Cape Breton, a few of the fingerling fish are being held over winter in the outside pond which has been covered over with deals and spruce brush in order to keep from freezing and protect the walls from the frost. I feel sanguine that a number of the young salmon can be grown until two or three years old and marked before liberated.

SESSIONAL PAPER No. 22

Carleton Pond.

In obedience to official instructions, I left Campbellton on October 25 to supervise operations at Carleton pond, St. John. Upon my arrival there, I at once ordered the work to commence. The fish were in splendid condition and upon careful examination, only about two-thirds were found to be ripe. Those which had not quite reached maturity were placed in separate cages in the salt water and were the last fish operated upon. The work was continued every day from October 26 to November 9, by which time all the fish were taken from the pond, about 1,000 salmon and their eggs collected and shipped to the various hatcheries as follows :—

Gaspé, P.Q.....	1,152,000
Margaree, C.B.....	1,025,000
Bedford, N.S.. ..	960,000
Grand Falls, N.B.	1,000,000
Restigouche, N.B.....	1,256,000
Grand total... ..	5,393,000

I have never heard of any place which offers such facilities for the purchase and care of parent salmon as the St. John harbour and Carleton pond. There is no question as to the health of the parent fish, robustness of the eggs and vitality of the fry.

General Remarks.

The salmon fishing throughout the Baie des Chaleurs was somewhat under the average this season. Of course the weather was very warm and dry during June and July, consequently the rivers dropped very low and the temperature of the water became high, which very much affects both netting and angling. Still some fair scores were made by anglers on the Restigouche and its tributaries. I heard of one small party getting a hundred fish, and one rod taking eight per day for a week—48 salmon in six days. Another party took 50 salmon on the Upsalquitch river in a short time. The fish were quite plentiful in the rivers in July and August, but owing to the increased netting and angling and poaching, it is doubtful if the rivers can always maintain their standard and produce uniform catches unless the capacity of the hatchery is increased or other steps taken to cope with the great drain now being made upon the salmon fisheries and upon this subject, I might quote the following extract from my report of 1897 :—

‘ When all the nets and all the angling is taken into consideration, one might well pause and ask how the balance of nature or salmon supply is to be maintained. It is no unusual occurrence to find upwards of 75 anglers scattered over the Restigouche and its tributaries at one time : each wanting eight fish per day, the limit fixed by the club. The fish are pursued to the very headwaters of the streams : even the Kedgwick and Patepedia were leased and fished last season. Then there are nets upon nets extending two hundred miles along the coast. The best catches of Restigouche salmon are now usually made at Green Point, on the gulf outside of the mouth of the Baie des Chaleurs. A few years ago, there was not a net within many miles of this place. Again it has been clearly demonstrated that other large fish and even the seals prey upon and break up schools of salmon in the sea, scattering them and entirely changing their course. This year the seals even followed the salmon 40 miles up the river and were seen quite late in the autumn killing salmon in the pools. Is it any wonder then, there would be an off year occasionally ? And now that angling has become such an extensive pursuit and the commercial value of salmon has reached such a high figure, being largely exported in the frozen state to the European markets, the question arises, what steps can best be taken to meet and offset these destructive devices and preserve a most valuable fishery ? ’

4-5 EDWARD VII., A. 1905

I may here state there has not been any effort made to offset these destructive agencies but rather the opposite has taken place, the netting in the estuary and on the coast has been increased since 1897, and the Sunday close time is not so closely observed. The number of anglers are generally increasing and there has been more poaching than for some time past, which the following newspaper clipping will corroborate :—

' Fined for Poaching.'

'Campbellton, N.B., Nov 18, 1904.—Considerable poaching on the Restigouche has been carried on of late. The head guardian of the Riparian Association, Max Mowatt, had four men, Cameron Adams, Andrew Dobson, W. M. Firth and Jno. Robinson up for trial recently for drifting for salmon. Adams was fined \$75 some time ago for a similiar offence, but the fine was allowed to stand for his future good behavior. Now this fine has been collected and another fine of \$75 imposed. The other men were fined \$50 each with costs, which amounts to about \$100.'

Owing to the new conditions and activity in the lumber business on the Restigouche, and the increased traffic of teams, scows, boats and men constantly plying up and down the rivers, going far to their heads, it is a simple matter for these men to poach the pools in July and August when the salmon have gathered in large numbers, and neither the Angling Riparian Association nor any of the governments interested have risen to this new condition of affairs. There are not men enough employed on the rivers to sufficiently protect them. In 1903, not a guardian was placed on the Kedgewick river by the provincial government, forty miles of that river, the main parent stream, were left open to the mercy of the poachers who slaughtered the salmon by hundreds, even using dynamite. This season, it was too late before the guardians were put on the Kedgewick and no guardians at all employed on the Patapedia river. Under these circumstances, I say it is not possible for the work of one hatchery to overcome and offset all these devices for destroying the fish. Protection and the artificial work must go hand in hand, if the rivers are to maintain their past records and great reputation. If the three Governments who are so much interested in the fisheries, Ottawa, Quebec and New Brunswick, would join and appoint a commission with the view of adopting better regulations among the netters and anglers, and if possible create a better system of guardianship for the rivers, assisting financially, great good would come of it. Unfortunately, the rivers were in flood this fall just when the fish were in the act of spawning, consequently the high water and strong current forced the fish up the smaller streams and on the very high beaches and islands of the river where they were obliged to deposit their eggs. A month or so later, when the water had receded, thousands of these beds were left dry and two-thirds of the natural laid ova will perish this year, and the crop of fry for 1905 will have to depend almost entirely upon the hatchery.

Trusting that the foregoing report may meet with your approbation,

I am, sir, your obedient servant,

ALEXANDER MOWAT,
Officer in charge.

12. SHEMOGUE LOBSTER HATCHERY.

CAPE BALD, N. B., December 1, 1904.

Prof. E. E. PRINCE,
Dominion Commissioner of Fisheries,
Ottawa.

SIR,—I have the honour to submit to you my second annual report, on the season's operations at the Shemogue hatchery.

We commenced placing the pipes and necessary gear so that the hatchery would be ready on May 26.

SESSIONAL PAPER No. 22

We found after placing the usual length of pipe, that a sand bar had been formed during the winter. Consequently we had to put on 72 feet of pipe more, to get sufficient deep water, which made our little boiler very hard to manage.

The eggs were collected in a good condition, and as the plant worked most satisfactorily, we had no trouble in hatching them. Fifty-two millions lobster fry were hatched in good healthy condition. We distributed them about 5 miles out from shore, over a distance of 25 miles.

I may add that the packers and fishermen are pleased with our work and were willing to help with the eggs, so far as obtaining ample supplies is concerned.

In accordance with your instructions, I had pipes, machinery and tanks, painted and carefully housed for winter and everything is satisfactory.

I have the honour to be, sir,
Your obedient servant,

NAP. S. LEBLANC,
Officer in charge.

13. GASPÉ HATCHERY.

GASPÉ, December 8, 1904.

To Professor E. E. PRINCE,
Dominion Commissioner of Fisheries,
Ottawa.

SIR,—I have the honour to submit my annual report upon the work of fish culture, as conducted at the Gaspé hatchery during the past year.

As stated in my report of December 6, 1903, I had in the troughs about 1,700,000 ova which were in good order and successfully hatched, with comparative small percentage of loss, and planted in different rivers as follows:

The Grand river.....	50,000
St. John river (Douglastown) ..	490,000
York river.....	490,000
Dartmouth river.....	490,000
Total.....	1,520,000

I was very successful with the Grand river fry this season as the SS. *Admiral* reached there in due time, and they were planted in the river without the loss of one fish.

Owing to the extreme low water in the rivers last summer, I was unable to get near up to the falls in the Dartmouth, and as in 1903, had to plant the fry below again this year.

After finishing planting the fry I had everything in the hatchery cleaned, painted and varnished for the next season's work. I also let the water out of the dam and had it well cleaned out. But I am sorry to say that the dam has begun leaking a little again through the rocks on the west side coming through a distance of about 30 feet. Owing to very little or no rain last fall the water is very scarce all round our neighbourhood although we are well supplied yet.

According to instructions I proceeded on October 29, to the Carleton pond (St. John, N.B.) for my quota of eggs and got back on November 4, with nine cases about 1,250,000 eggs and had them in the troughs the same night in good order and a small percentage of loss.

4-5 EDWARD VII., A. 1905

Owing to there having been less parent fish in the pond, I could not get my full complement, or as many as I had last season, but if all goes well I hope to have a fine lot of fry again next summer.

In reading over the report of Mr. Alexander Mowat for 1903, who is in charge of the Flat lands or Restigouche hatchery, I see that he recommends the covering of the cans when planting the fry which I believe is very necessary going up our rivers where there is very little or no wind and many days a scorching sun which necessitates the changing the water so often that the delay keeps the fry a long time in the cans. If all goes well I will adopt his plans next season.

I was disappointed that we did not get a retaining pond built near our own hatchery last summer so that we could stock our rivers with our own fish. There is no doubt whatever that the Gaspé salmon is superior to the St. John, N.B. fish, if not in quality certainly in size.

I have the honour to be, sir,
Your obedient servant,

R. LINDSAY,
Officer in Charge.

14. TADOUSSAC HATCHERY P. Q.

TADOUSSAC, November 28, 1904.

Professor E. E. PRINCE,
Dominion Commissioner of Fisheries,
Ottawa.

SIR,—I have the honour to submit my annual report of the operations carried on at the Tadoussac hatchery for the year ending in a month.

From the crop of salmon eggs 3,300,000 collected from the parent salmon kept in our pond until November, 1903, 400,000 salmon eggs packed in moss have been sent to the Roberval hatchery of the Lake St. John, the property of H. J. Beemer, and 2,615,000 salmon fry have been planted in June, 1904, in the following rivers and Lakes.

Chisholm river.....	500,000
Ste. Marguerite river.....	300,000
Baude river.....	300,000
A Mars river.....	300,000
St. John river.....	200,000
Little Saguenay river.....	200,000
Murray river.....	200,000
Du Gouffre river.....	100,000
Jacques Cartier river.....	100,000
Black river.....	100,000
Thomas lakes.....	300,000
St. Hubert lake.....	5,000
Hatchery lake.....	10,000
Total.....	2,615,000

SESSIONAL PAPER No. 22

After the distribution, the breeding room has been washed all over, and a great deal of work has been done to the troughs to make them water tight, and then all varnished with two coats. The breeding room is now in good working order, well supplied with water from the hatchery lake, and by the corporation of Tadoussac supplying water to the hatchery from the aqueduct by a two inches tube. As the hatchery lake is very high this fall and with the additional supply from the water works of the village of Tadoussac, there is not the least danger of any shortage of water for this winter.

As usual we set our nets in May for the capture of the parent salmon, but this season has proved to be a bad one. The first run of parent salmon coming in very late and in small number we have succeeded in catching only 389 parent salmon in our two salmon fisheries: 248 were females, good many of small size, and 141 males. Our crop of salmon eggs is 2,170,000. From that number 200,000 eggs packed in moss, have been sent to Chicoutimi by the last trip of the Richelieu Boat Co., and handed over to the cars for the Lake St. John, by my son, to Mr. T. L. Marcoux, the manager of the Roberval hatchery.

The shortage in the number of parent salmon this season is accounted for in great part to the want of east winds, except two days, in the salmon fishing time. In the west wind, the salmon coming up are following the strong current coming out from the Saguenay river, and by doing so, they are not landing enough and escape our nets. This season we have seen in our salmon nets an unusual number of small size salmon. The greatest part passing through the nets when the men were seining the parent salmon and the biggest being thrown outside the fishery.

The little spawning house destroyed by fire last fall has been rebuilt in October, also the large wooden tanks around the little house, to hold the parent salmon before and during the spawning time. I have noticed that the eggs from the parent salmon kept many days in the tanks, entirely in fresh water, are generally better than the ones collected from salmon taken from our salmon pond without remaining a few days in fresh water. Another good reason for having all our parent salmon placed in our tanks as early as possible is this: some of the female salmon commence to spawn in the pond and the eggs are lost, as the thing has been observed this fall, some females when taken in for spawning, deposited their eggs on account of our wooden tanks not being ready early enough to receive the parent salmon. My intention for next fall is to have two more large wooden tanks made in the stream above the spawning house so as to be able to place all our parent salmon in the tanks some time before the spawning. This fall the cold weather set in very early and we have had great trouble with the ice in seining our parent salmon. The repairs authorized to be done to the second dam of the hatchery lake will be done in August next when the lake is generally low. The raising higher of 5 or 6 feet of the second dam will allow the first dam of the lake to be covered by the water and will keep the whole lake always high. I will have all the heavy lumber and deals ready in time to have the work done next summer. By doing so the trouble experienced last winter by the shortage of water for our hatchery will be avoided. We have now an additional supply of water from the aqueduct of the village of Tadoussac. As the Tadoussac lake furnishing the aqueduct of the village is supplied by a great number of sources, and its water remarkably cold, it will be of immense service in keeping the temperature many degrees lower in the distribution of the salmon fry at the end of June when the water of our hatchery lake gets so warm sometimes. We require for the next season a good barge for towing the scows of parent salmon in calm weather. The old one is not safe now. Our long sailing boat does the service in windy or rough weather.

In the winter, in the stormy days,—and they are numerous—the building is moving and cracking awfully; we keep three stoves running, and it is still cold. It is always for me a cause of great anxiety about the fire. The north-west wind blows so fearfully, and the building moves so much, it sometimes moves the stoves, and may be a cause of danger, notwithstanding all the care taken in living in the building. I believe that the department would be wise to keep a night guardian, specially for the months of December, January, February and March. I hope that you will give your kind attention to this part of my report. I have also to report that the work done to the dam of the salmon pond has not proved to be good; it is as bad as before. At low

4-5 EDWARD VII., A. 1905

tide a great part of the water runs out of the pond by holes made in the dam. I may say that the north end of the pond is deeper than the part close to the dam, thus leaving enough water for our parent salmon. Instead of having the repairs done inside of the dam, as made by the Department of Public Works, it should be done outside of the dam, because all the strength of the water with the rising tide comes from the outside.

I have the honour to be, sir,
Your obedient servant,

L. N. CATELLIER.

15. NEWCASTLE HATCHERY, Ont.

NEWCASTLE, December 6, 1904.

To Prof. E. E. PRINCE,
Dominion Commissioner of Fisheries,
Ottawa.

DEAR SIR,—I have the honour herewith to submit a report of the fish cultural operations carried on at this hatchery during the past year.

The following schedule will show you the points of distribution, also the number of fry placed in each locality last spring :—

Salmon Trout.

Lake Ontario, Hamilton	50,000
“ Toronto	50,000
“ Cobourg	50,000
Bay Quinte, Belleville	50,000
Lake Ontario, Consecon	50,000
Bay Quinte, Picton	50,000
Lake Ontario, Whitby	50,000
“ Kingston	50,000
Sand Banks, Picton	50,000
Georgian bay, Collingwood	50,000
“ Meaford	100,000
“ Wiarton	100,000
Lake Huron, Goderich	100,000
Simcoe, Barrie	25,000
“ Couchiching	25,000
Lakes Bay Quinte, Ry., Napanee	50,000
Charleston lake	50,000
Westport	25,000
Portland	35,000
Lakes on Mountain Glenora	25,000
Four Mile lake, Burnt river	25,000
Myers lake, Brampton	25,000
Fagle lake and Green bay	50,000
Lake Erie, Cedar springs	50,000
Lakes at Wilberforce	50,000
“ St. Ola	50,000
Lake Ontario, Newcastle	150,000
Total	1,475,000

SESSIONAL PAPER No. 22

I beg to inform you that all the fry deposited in the different waters was in the very best condition.

According to your instructions I proceeded to Wiarton on the third day of October, with the usual assistants to procure salmon trout ova for this and the other hatcheries.

We succeeded in getting our two nets set about the 29th of October, after considerable difficulty as the high winds during the greater part of October were so continuous from day to day it occasioned us a great deal of annoyance and delay. Often we sailed from Wiarton to our grounds which are about nine miles from Wiarton and had to return owing to the strong winds from the east and north-east. However, I am pleased to report all through November we had very little difficulty in securing a full supply of eggs for this and the other hatcheries. I handed to Mr. Stanford Walker of the Ottawa hatchery 1,000,000 and at the same time 600,000 for Mount Tremblant on the 16th day of November. On the 25th I took 800,000 for the Magog hatchery which leaves about 2,500,000 laid down in the Newcastle hatchery, with every appearance of being first class and doing well.

Our plant in Wiarton is in very good condition except the spawning boat which will have to be gone over again next summer.

We have had our hatchery painted throughout this summer and it gives it such an improved appearance that visitors and passers-by stop to admire it. We built a bass pond in close proximity to the hatchery and raised about from four to five hundred bass which were taken to Ottawa in October and distributed in the different waters scheduled from that point; we also raised some two thousand more or less of salmon trout and a portion of them were exhibited at the Toronto exhibition and attracted great attention. We have now on hand about 800 young salmon trout in our spring water tank nine months old doing well and growing fast, we feed them daily and hope to keep them until spring with a very small percentage of loss. Altogether we have had a successful year and all appearance of a continuation of prosperity during the winter and spring for 1904 and 1905.

I have the honour to be, sir,
Your obedient servant,

WM. ARMSTRONG,
Officer in Charge.

16. SANDWICH HATCHERY.

SANDWICH, ONT., December 13, 1904.

To Prof. E. E. PRINCE,
Dominion Commissioner of Fisheries,
Ottawa.

SIR,—In accordance with the rules of the department and in compliance with your instructions, I take pleasure in submitting my annual report of the work connected with the fish hatchery here under my supervision.

According to last year's report, this hatchery contained 67,000,000 whitefish eggs from which were hatched 51,000,000 young fry, which were distributed as follows.—

4-5 EDWARD VII., A. 1905

Point Edward, Lake Huron.....	3,000,000
Peach island, Detroit river.....	2,000,000
Fighting island, Detroit river.....	4,000,000
In lake below Fighting island.....	3,000,000
Stoney island, Detroit river.....	2,000,000
Bois Blanc island, Detroit river.....	7,000,000
In lake below Bois Blanc island.....	4,000,000
Pigeon, bay, Lake Erie.....	2,000,000
Barr Point, ".....	2,000,000
Colchester, ".....	2,000,000
Kingsville, ".....	1,000,000
Leamington, ".....	1,000,000
Rondeau, ".....	1,000,000
Port Stanley, ".....	1,000,000
Hamilton, Lake Ontario.....	1,000,000
Niagara, ".....	1,000,000
Toronto, ".....	1,000,000
Belleville, Bay Quinté.....	1,000,000
In river at hatchery...	12,000,000
Total.....	51,000,000

Collecting Pickerel Eggs.

After clearing the hatchery of the young whitefish, we at once made arrangements for the reception of pickerel (doré) eggs which were collected from the pound nets in Lake Huron and Hitchcock's seining grounds at Point Edward. We succeeded in procuring 45,000,000. From these eggs were hatched out 24,000,000 young fry, which were placed in the following waters :—

Round lake and North river, Peterborough.....	500,000
Bowley's lake, Almonte, Ont.....	500,000
Silver lake, Maberly, Ont.....	500,000
Mississippi river, Snedden, Ont.....	500,000
Trout lake, Black lake, Quebec.....	500,000
Above Point Edward, Lake Huron.....	5,000,000
Detroit river.....	16,500,000
Total.....	24,000,000

This fall we secured and laid in the hatchery 100,000,000 whitefish eggs, which are in good condition, and we fully expect to turn out a large percentage of young fry next spring.

The Catch of Fish

Along the Detroit river and adjoining lakes the fishing has been a little better than last year, and I have much pleasure in stating that, as a consequence, we have succeeded in filling all our jars with eggs.

I am, sir,
Your obedient servant,

WM. PARKER,
Officer in charge.

17. OTTAWA HATCHERY.

OTTAWA, ONT., October 19, 1904.

Prof. E. E. PRINCE,
Dominion Commissioner of Fisheries,
Ottawa.

SIR,—I beg to submit my annual report of the operations carried on at the Ottawa fish hatchery during the season of 1903 and 1904.

On November 10, 1903, were received from Mr. Wm. Armstrong 1,000,000 salmon trout eggs from Wiarton. The eggs were in good condition and very slight loss sustained during the season of operation. Were also received on the same date, at the hatchery, about 75,000 Atlantic salmon eggs, which were all laid down in the incubating troughs in first class condition, and the fish hatched out strong and healthy in the month of May and first week in June.

The work of distributing the fry was done very successfully by Messrs. A. Finlayson, A. M. Ross, Jos. Rochon and S. J. Walker, officials of the Marine and Fisheries Department.

The young salmon trout and Atlantic salmon were deposited in the under-mentioned waters.

During the year, 14,100 persons visited the hatchery.

Distribution of Salmon Trout.

Lister lake.....	45,000
Sixteen Island lake.....	25,000
White Fish lake.....	40,000
Ox Bow and Bingall lake.....	25,000
No. 7 lake.....	25,000
Gregoire lake.....	25,000
St. Esprit lake.....	25,000
Ricard lake.....	25,000
Lac a Picotte.....	25,000
Meaches lake.....	30,000
Gibbs lake.....	25,000
St. Sixte lake.....	25,000
Rock lake.....	30,000
La Rocque lake.....	20,000
Lac Noir lake.....	30,000
Rivière L'Achigan.....	30,000
Goods lake.....	20,000
Hogg lake.....	25,000
Byres creek.....	25,000
Moose lake.....	25,000
Findlay lake.....	25,000
Bass and Otter lake.....	30,000
Sharbot lake.....	40,000
Christie lake.....	25,000
Otty lake.....	20,000
Victoria lake.....	40,000
Three Salmon lake.....	30,000
Charleston lake.....	30,000
McKays lake.....	15,000
Magog lake.....	20,000
Total.....	820,000

4-5 EDWARD VII., A. 1905

Distribution of Atlantic Salmon.

St. Sixte lake.....	3,000
Moose lake.....	3,000
Sharbot lake.....	6,000
Christie lake.....	9,000
Victoria lake.....	6,000
Rock lake.....	6,000
Charleston lake.....	12,000
Barton lake.....	12,000
Total.....	57,000

I remain, sir,
Your humble servant,

JOHN WALKER,
In charge of Ottawa Hatchery.

18. SELKIRK HATCHERY, MANITOBA.

SELKIRK, Sept 15, 1904.

Professor E. E. PRINCE,
Dominion Commissioner of Fisheries,
Ottawa.

SIR,—I have the honour to submit herewith my annual report of the work done at our hatchery for the season of 1904.

The supply of spawn was taken from Lake Winnipeg, and liberated in the spring into the Red river.

It was the intention of your department to send a supply of spawn from Sandwich as had been done in the two preceding years. But pursuant to instructions I gathered forty-two millions from our own waters, as an experiment and to supplement whatever was to be sent here from the east.

I engaged the steamer *Frank Burton* and took with me all the apparatus that was available for the purpose and proceeded to Black river on the east shore of the northern part of Lake Winnipeg. We left here on the 30th day of September and reached the spawning grounds on the 2nd day of October, a distance from Selkirk of about 240 miles.

I experienced some difficulty in getting men to assist in catching the fish. I had been assured that the fishermen at that point had not yet lifted and their assistance could easily be procured. This was in a measure true, but as their season was ended and they had been for a considerable time from home it was not easy to persuade them to remain longer.

We managed to rig out four sail boats with four men to each boat and each with six pieces of net. We set the nets on the 9th, but until the 12th we got very few fish. From the 12th to the 15th inclusive, we had a most successful run, we remained in the grounds until the 22nd, but the run for the time was over. As our crates were filled and as many in the delivery cans, which I had taken with me, as was prudent considering our facilities for keeping spawn in them in good condition. We left for Selkirk. Of the fish caught by us there was a heavy preponderance of males. Nearly

SESSIONAL PAPER No. 22

in the proportion of three to one. For information I left some net with an experienced fisherman there and instructed him to keep it set and watch for other runs if there were any. He reported to me later that in about a week after we left another and much larger run of fish came shoreward and in which the females preponderated and more of them at a maturer stage. It would seem that we must have got an early run of fish. We packed our crates with ice and they were in almost perfect condition when we arrived at the hatchery.

On the other hand though we changed the water every half hour in the cans the spawn in them was in poor condition.

We were, owing to the perfect condition of the spawn brought in by the crates, able to save ninety per cent of them in the season, but were unable to save more than ten per cent of those brought in by the delivery cans. The longest time the spawn was in cans was hardly a week, while the spawn in the crates was taken nearly two weeks before. If it is the intention of the department to take spawn from our lakes I would strongly recommend a much larger number of trays, as the distance is too great to save spawn in the cans.

In both trays and cans, we brought in 42,000,000 ova, of which we hatched 31,500,000 of good healthy fry, and which we liberated as above mentioned into the waters of the Red river.

By the first of March some of the fry began to run into the tanks, as the screens in the tanks worked very imperfectly, I had them taken out and a galvanized iron pipe 8 inches in diameter placed around the inside of the tank, and had the upper surface perforated with two inch holes. Along the upper side of the pipe I had a brass strainer cloth 60 mesh, soldered on tight. All the water in the tanks had to pass through the the perforation in the pipe covered thus with the strainer cloth. After this was done we did not lose a single fish. By the end of March, the water in the tanks was quite dense with fish, and by April 12, the tanks were overcrowded. The ice on the river was still firm and the temperature of the water was 32°. To have let the fry run into the river at that stage, would not have been advisable, so in order to relieve the congested state of the tanks, I had two new ones built, of the same capacity, fitted in the same way with screens; which were completed on April 15. I was then enabled to transfer some of the fry to these.

The ice on the river did not break up until April 20, and the temperature of the water was 32°. By the 27th the temperature had risen to 41°, we began then to liberate fry and when the last lot was set free, the temperature of the river water was 50°.

It will be observed that some of the fry were in the tanks for over six weeks, when liberated they were in a healthy and fine condition. Of course the water running through the tanks was the river water.

I have had many requests from those living in the vicinity of the small lakes throughout the province, to have these waters stocked with fish and as pickerel would be very suitable, I would recommend that pickerel spawn be hatched every spring in the hatchery here, and the fry placed in these smaller lakes. It would be impossible to catch and transport the parent fish successfully, as there are many difficulties to contend with.

The improvements to the hatchery building and ground sanctioned by the department are being carried into effect. The building was painted since my last report with two coats of white lead and re-lettered, the trimmings were coloured a light slate. There was a banking all around the building, about three feet high, and as a consequence, was rotting out the foundations of the building. I had this removed, the foundations repaired and had it boarded all around with shiplaps tar paper placed over this and a base belt V joint three feet high put on the outside. I also lined up the south wall between the fuel room and the hatchery proper, with paper and V joint, and the outside fuel room door widened, also placed double doors leading from the fuel room and store room.

There was also partitioned a panel of the hatchery, with V joint, making a small room designated as a hospital. The tanks were refitted with screens as described above and two new ones built, fitted similarly with screens.

As the building is situated on a lower plateau of the river bank, water from the higher levels has hitherto run down under the hatchery and undermining it. Last year

4-5 EDWARD VII., A. 1905

a drain was put in around the upper side and end, built of tamarack, which now carries this water away into the river. The conductor pipes on the building are tapped into this drain, the foundation is now kept perfectly dry.

When the site for the hatchery was chosen some ten or twelve years ago, the land was donated by the town. There was an understanding at the time between the town council and the official acting for the government that the ground would be kept in good order, in a manner compatible with the character of the street in which the hatchery is placed. It is considered one of the finest residential streets in the province. Nothing was done, however, in that matter until the department took it up two years ago. Since then the grounds have been ornamented by a Frost iron fence, trees planted, garden plots laid out and the rest made into a lawn. Its appearance now rivals that of some of the finest in the town.

In conclusion I would like to tender my thanks to yourself and the officials of your department for the assistance and suggestions that from time to time have been rendered to me.

I feel constrained to say that I have strong faith in the work being done by the hatchery here. My observations from year to year convince me that it is a great benefit to our fisheries.

I have the honour to be, sir,
Your obedient servant,

WM. S. YOUNG,
Officer in charge.

19. MAGOG HATCHERY P. Q.

MAGOG, December 9, 1904.

Professor E. E. PRINCE,
Dominion Commissioner of Fisheries,
Ottawa.

SIR,—I beg to submit my annual report of the operations at Magog hatchery for the season of 1904.

The following schedule will show the points of distribution also the number and kinds of fry planted in each locality last spring.

Salmon Trout.

Lake Memphremagog.....	50,000
Lake Massawippi.....	25,000
Lake Oxford.....	15,000
Key pond.....	15,000
Brome lake.....	25,000
Sucker pond.....	15,000
Lac des Poulins.....	25,000
Lake Lyster.....	25,000
Lac Fortin.....	25,000
Lac Dussault.....	25,000
Lake Longwick.....	20,000
Crystal lake.....	15,000
Total.....	280,000

SESSIONAL PAPER No. 22

Speckled Trout.

North Hathy Trout pond.....	3,000
Grand total.....	283,000

I beg to inform you that the fry were all deposited in the different waters mentioned above in the very best condition.

In reference to repairs I wish to report that those done to the hatchery and tenement have been completed according to instructions received. These were very much needed.

I have the honour to be, sir,
Your obedient servant,

A. L. DESEVE,
Officer in charge.

21. SHIPPEGAN LOBSTER HATCHERY.

SHIPPEGAN, N. B., December 31, 1904.

This hatchery, in charge of Mr. Sebastien Savoy, completed its first season's lobster incubating operations on July 11. Under the superintendence of Mr. Alfred Ogden, of the Bedford hatchery, N.S., the arrangements were advanced rapidly at the commencement of the season, so that before the end of June, eggs commenced to be collected from the adjacent lobster canneries and conveyed to the hatchery, where Mr. A. V. Gibbs, engineer, had all ready to proceed with the operation of the pumping apparatus. By June 27, over 22 of the capacious glass hatching jars were filled with eggs; but the collection of fresh supplies was continued over a distance of fifteen miles to the east and five miles to the west by means of horse-team rather than steam tug, 15 to 18 lobster factories being visited by this means. Early in July, three times the above quantity had been secured, and as all the jars (66 in number) were filled, the collecting of eggs stopped, and as the fry began to hatch out rapidly the work of distribution commenced. Between the 15th and 23rd of July, the greater part of the fry were distributed along the coast one or two miles out. The work of the hatchery, notwithstanding that it was under the disadvantages of being a new institution, in a locality where lobster hatching and planting by artificial aid had never before been attempted, was in every respect successful, and next year even larger and more satisfactory results may be looked for to the benefit of the valuable canning industry all along the Gloucester and Kent county shores.

22. BLOCK HOUSE POINT HATCHERY.

CHARLOTTETOWN, P.E.I.

This new hatchery was completed in time to commence operations when the lobster fishing season opened. The officer in charge, Mr. James E. Grant, who has been long connected with the lobster industry and is well posted in the habits and movements of the lobster and its distribution along the shores of Prince Edward Island, had all things ready to receive the first batches of eggs which began to be collected from the canneries in May. About May 10, a special tug was employed and continued day after day, when the weather permitted, to secure supplies of lobster ova from the various canning establishments within reach and Mr. Grant, with assistance, was able by the middle of June to fill between 125 and 130 jars. Owing to the stormy weather in May it was found impossible to fill all the jars. About the 13th of June, the hatching out began and by the 22nd a very large proportion of young lobsters were placed in the retaining tanks prior to distribution. On June 20, Mr. Grant visited the Bay View hatchery, Caribou Harbour, and saw the distribution of young lobsters proceeding there. From the information gained by this practical insight into the methods of handling the fry after they came out of the eggs, the officer was able to carry on successfully the distribution of the fry from the hatchery at Block House Point. In the meantime the collecting of ova went on and a total of 200 jars was obtained by June 22. About that date the young lobsters began to settle on the bottom of the retaining tanks, and distribution had to be carried on with renewed vigour. Mr. Grant was instructed to distribute them three miles from shore or more and to select by preference areas where the bottom is rocky, as it has been found that young lobsters seek crevices in rocky localities in which to hide from their numerous enemies after the habit of floating at the surface, or within a few fathoms of the surface, of the sea has ceased.

Although the hatchery was not filled to its full capacity, the results of the first season's work must be regarded as satisfactory as the plant could not be fully installed until the lobster season was close at hand. The planting of several millions of young lobsters along the shores of Prince Edward Island in the Northumberland Strait's waters must have a beneficial effect upon the supply of lobsters and the canning industry dependent thereon.

ANNEX C.

REPORT ON OYSTER CULTURE BY THE DEPARTMENT'S EXPERT
FOR THE SEASON OF

1904.

CHARLOTTETOWN, P. E., ISLAND, December 4, 1904.

To Professor E. E. PRINCE,
Dominion Commissioner of Fisheries,
Ottawa.

SIR,—I have the honour to submit to you my annual report on oyster culture of last season's work in the lower provinces.

After the opening of navigation, the *Ostræa* was removed from her winter quarters, and when ready for sea, was engaged in patrolling the Northumberland straits, on lobster protection, west of Indian Point, near Cape Tormentine, N. B., and Cape Traverse, P. E. Island, until May 24, when I proceeded to Point au Chene, leaving the steamer there, while I visited the areas planted in Annapolis basin.

Annapolis Basin, N. S.

During the season of 1902, some oysters were planted in various parts of this basin as an experiment, to ascertain if it would be practicable to cultivate oysters there successfully or not.

On my arrival at Deep Brook, I made arrangements to visit the beds, and on the low water, examined the area previously prepared, and planted on the north side of Goat island, and am pleased to report the oysters are growing in a very satisfactory way and several small ones of last year's spat, and the year before, were found attached to the larger ones. I noticed very little mortality on this bed, the shells and oysters were very clean and free from sediment: I am perfectly satisfied with their growth and the condition in which I found the area.

I also inspected some of the other areas where oysters were deposited, and the sample raised had also grown in a satisfactory manner. I have just received a letter from Mr. Robert Spurr, fishery warden in the locality, and who assisted in planting the oysters on the different areas, in which he reports to me as follows:—

'We took a day during the September tides, and visited the oysters on the south side of the basin, and although the water was thick, we dipped oysters from each bed, and they appeared as far as we could judge, to be in a thrifty condition, some time later. (in October) I found in Vrome's Point a small oyster attached to a piece of rock. In July a man while digging clams found an oyster partly imbedded in the mud, he threw it in the water on rocky bottom; where this oyster was found would be about two thousand yards west of the most westerly bed, and likely to be carried there by the ice.

Large quantities of heavy ice were in the basin last winter and the weather very severe, but apparently it did not injure the oysters, and if they lived through last season I have every hope of their ultimate success.

Reports are current that oysters were being removed from the Goat island bed by picnic parties and others during the summer months. It is most important that these grounds should be carefully watched, now that the oysters are commencing to spawn, until they have spread over a larger area of ground and taken a firm hold.

Posters have been printed and placed in conspicuous places, which read as follows:—

4-5 EDWARD VII., A. 1905

Public Notice.—All parties are warned that fishing for oysters on the adjacent oyster beds, or any disturbance of these beds is illegal, and will entail the penalties prescribed by the Fisheries Act, 1886, chap. 95, section 21, subsection 6.

This is a warning to the public not to molest the beds, and I believe the lightkeeper opposite Goat island has been requested to watch the beds at low water, as that is the only time when they can be taken owing to the strong current and heavy rise and fall of the tide which varies from thirty to fifty feet.

Murray Harbour, P.E.I.

After completing my examination in Annapolis basin, I returned to Point au Chene and proceeded to Murray harbour with steamer and made an examination of the area under cultivation, which I found as follows :—

The eelgrass had grown over a large portion of the bed and large quantities of eelgrass had accumulated there as well. The oysters have grown to a considerable size and found a few young ones growing on the beds ; also small oysters were found on the rocky points on the west side of Reynold's islands, they had grown to about the size of those formerly planted and looked healthy. While here my time has been engaged in removing the dead and live eelgrass from the bed, and I left it in a fairly clean condition on June 24. The protection to these beds is defective and something should be done to improve it.

Richmond Bay.

From Murray harbour I proceeded to Richmond bay and arrived in Malpeque on June 30, when I reported for duty to Professor Ramsay Wright to assist the biological staff stationed here during the summer months. Each day the *Ostrea* was engaged in obtaining specimens from the sea, under the direction of Dr. J. Stafford, who always accompanied us, and during the season as many varieties as possible were obtained from the surface of the water, also below the surface by plankton nets, and from the bottom by the aid of the dredge. A special study of the oyster and oyster spat was made this summer, from the ova before leaving the parent oyster, its progress during its swimming stage, and its final attachment to solid material on the bottom until it became visible to the naked eye ; this study being carefully followed out in every detail from the commencement with marked success ; oysters of various size were also deposited in trays to watch their actual growth during a certain period of time. A full report of the above scientific work will as usual be submitted to the department by the staff attached to the station. This work continued until the latter part of September when the investigations was closed down for the season, we sailed from there arriving in Charlottetown on the 28th September last.

Charlottetown.

On my arrival here I reported to Inspector Matheson, when I proceeded to the upper part of East river, accompanied by the inspector and fishery officer Hobkirk, where we met the oyster fishermen and came to an understanding with the latter, as they were in the habit of depositing the oyster cultch on the river banks to the detriment of the beds, as many small oysters were landed and perished ; when this was pointed out to them they promised not to land any more, also spoke to them regarding the size limit, &c.

I also visited the North river and found the oysters were again increasing in numbers, although the size was small, the sample looked very healthy and clean, and I would not consider it advisable to allow mud digging to be carried on any further down the river between the upper line drawn, and the North river bridge, below the bridge, mud for fertilizer can be obtained in large quantities.

My time was also engaged in patrolling the shores between Charlottetown and Summerside on lobster protection service, and succeeded in seizing several lines and

SESSIONAL PAPER No. 22

traps off St. Peter's island, Canoe cove, Cape Traverse and Carlton head. This I continued to do during the time wind and weather permitted and until the season became too severe to do any more work, when I dismantled the steamer and placed her in winter quarters and had her blocked up clear of the ice.

Areas for Private Culture.

Our oysters appear to advance in price each year, and up to the present time it must be pointed out, that all are caught from natural beds. This industry could be very much increased and improved upon, by private culture, if it was possible to make some arrangement with the provincial governments whereby the water bottom could be converted into oyster areas by persons who would care to go into such an undertaking. I cannot recall a single country where oysters grow and the inhabitants are debarred from cultivating them. This is certainly a serious obstacle as the cultivated oyster is much superior to the natural grown ones, besides the source of revenue it brings to those who are interested in oyster culture.

It would also be a means of bringing in a revenue to the Dominion or Provincial treasuries if some arrangements could be made whereby persons could take up areas at a nominal rental, holding the ground in their own name as long as said rental was paid, or for a certain figure give them a freehold title deed, or royalties might be levied on the quantities of oysters sold from the beds. Some arrangement could certainly be made either by your department or parliament so that persons could enter this branch of industry on their own account. Take for instance the revenue that is derived from the foreshores and water bottom of the United States, France, England, Italy, Japan and many other countries, and yet persons who are anxious to obtain a piece along our shores cannot do so, and for no advantageous reason whatever. I would like to see some definite decision arrived at, so that persons could take up areas if they wished to as I am sure it would add another source of profit to all those interested in the industry.

Size Limit and Close Season.

For some time past I have pointed out the necessity of increasing the minimum size limit, both as a protection to the oyster beds, and for improving the sample of oysters sent to market, and I am pleased to report that on the 21st of May last, the following Order in Council was passed:—

Clause 4. 'Oysters shall not be fished for, caught, killed, bought, sold or had in possession, from the 22nd day of September in each year, both days inclusive: Provided that this prohibition shall come into force in Richmond bay, Prince Edward island on the 21st day of May, 1904, and elsewhere on the 21st day of May, 1905.

'6. No person shall fish for, catch, kill or buy, sell or have in possession any round oysters of a less size than three inches in diameter of shell, nor any long oysters measuring less than three and a half inches of outer shell. Round oysters of a less size than three inches in diameter, and long oysters measuring less than three and a half inches on the outer shell, and that may be accidentally caught, shall be returned to the water alive, at the cost and risk of the person so fishing, upon whom, in every case, shall devolve the proof of actual liberation.

'Provided always that persons holding fishery licenses, may obtain from the Minister of Marine and Fisheries, permission to fish for and catch small oysters for the purpose of planting or stocking oyster beds.'

The above change may probably affect the quantity of oysters caught during the present season to some extent but it will greatly improve the sample sent to market and enhance prices. Previous to the above regulations being enforced, merchants were often compelled to purchase oysters that were of little marketable value although legal in size, and I feel sure the above change is approved of by both merchants, fishermen and buyers and will also prove a great benefit to the industry.

The shortening of spring fishing by ten days will also prove a benefit; many persons have expressed a desire to abolish spring fishing but I do not altogether agree

4-5 EDWARD VII., A. 1905

with them, as I consider what little fishing is done, only improves the beds after laying dormant all the winter as the beds are coated over with a thick slimy sediment, and fishing on a small scale has the effect of removing this deposit, thus cleaning the grounds for the following season's spat to adhere to.

Oyster Barrels.

My attention has been called from time to time to the different sizes of barrels that are now being used to ship oysters in from the island and elsewhere, and have been requested to point this matter out to the department and see if a standard size could be adopted. Formerly oysters were shipped in the regular flour barrel and that has really been the recognized measure for a barrel of oysters, but some unscrupulous person commenced taking the staves out of flour barrels, until now a person does not know what they are paying for when they order a barrel of oysters. The flour barrel is much the easiest and cheapest to obtain, but the merchants and others require a standard size to be recognized by law, whether large or small they care not, but some law should be adopted relating to a standard size to protect the public and merchants from being swindled.

The dimensions of an ordinary flour barrel are about as follows:—seventeen inches top and bottom, with two inches bilge and twenty-five inches deep on the inside, and to contain nothing less than ten pecks. This is a very important matter, and I would respectfully call the department's attention to take immediate action without any further loss of time.

Improvement of Public Areas.

While in Malpeque, this summer, it was particularly noticeable that poaching small oysters was carried on to a considerable extent from Beech Point, Big and Little Curtain islands and Ram island, although these men always made off on the appearance of the steamer. These oysters are deposited on certain areas and cause a very unpleasant feeling among the fishermen generally.

If the persons who are appointed to watch these areas could be engaged with some other help or Indians to pick up these small oysters and transplant them on the deep water beds in the bay it would prove of great advantage to the industry, it would prevent poaching and give employment to several persons during the close season and restock the public beds; this could be done at very little cost and would benefit the whole of the fishing community. Oysters are becoming more valuable each year and the number of fishermen appears to increase rather than decrease, so that at present the beds are being fished to their utmost capacity, consequently the oysters are becoming scarcer each year.

I have the honour to be, sir,
Your obedient servant,

ERNEST KEMP,
Oyster Expert.

APPENDIX No. 12.

REPORT ON COLD STORAGE WORK IN 1904

By SPECIAL OFFICER PETER MACFARLANE.

NEW GLASGOW, N.S., December 15, 1904.

To Professor E. E. PRINCE,
Dominion Commissioner of Fisheries,
Ottawa.

SIR,—I beg leave to forward the following report of the bait cold storage work under my charge in the maritime provinces.

Reference has been made in the annual reports of the Deputy Minister, for the past five years, of the inception and progress of this work, which may be briefly referred to. In the report of 1898, the following occurs :—

‘ This scheme (bait cold storage), devised in the interests of the fishing population, aims to meet a need which has been profoundly felt by the fishermen, viz., the ensuring of supplies of bait which will be available when needed. Season after season the complaint arises that the bait is scarce, precisely when it is most urgently required ; yet such bait can, as a rule, be obtained earlier in the season of abundance, when the men are not in immediate need of it. The lobster commission of 1898 made reference in their report to a proposal for providing cold storage for bait, and during the year the matter was prominently brought forward in the provincial legislature of Nova Scotia. In no way could our fishing population in the maritime provinces be more effectually assisted, and the furtherance of the fishing industries be aided than by enabling the fishermen to acquire the means of securing and preserving supplies of bait in cold storage. A project for building freezers was fully considered, and the details rapidly completed early in the year. Before the end of April, 1899, practical measures were on foot, a complete scheme for the formation of local bait associations was formulated, and printed circulars were issued giving full information respecting the fishermen's bait associations, the erection of refrigerator buildings and directions for their successful operations. Valuable aid was rendered by Prof. J. W. Robertson, Commissioner of Agriculture, in developing the scheme and disseminating information among fishermen and parties interested. The parliamentary appropriation of \$25,000 enabled the department to carry out this valuable and comprehensive movement at once. A special officer, Dr. Arthur Kendall, was authorized to take the necessary steps, both in regard to the organization of bait associations in various localities and the construction of freezers under the auspices of the Dominion government and the local associations.’

During 1899, the offer made by the department to the fishermen was explained in the maritime provinces, and arrangements completed and freezers built at several points, viz., Ballantyne's cove, Antigonish Co., N.S. ; Frog pond, P.E.I. ; Alberton, P.E.I.

A freezer was built at Neil's harbour, C.B., by M. G. McLeod & Co., from plans furnished by the department.

In 1900, the above named freezers were in operation and the work of organization and construction proceeded at a number of points indicated below.

The following is a list of freezers which had been operated up to January 1, 1903, together with a statement of their capacity, cost and the proportion of the costs paid by the department :—

FREEZERS CONSTRUCTED UP TO JANUARY 1, 1903.

Locality.	Province.	Nominal Capacity.	Cost.		Proportion Government Grant.	
		Tons.	\$	cts.	\$	cts.
Frog pond	P.E.I.....	20	1,160	18	580	09
Alberton	"	30	1,347	67	673	83
Miminegash	"	10	840	46*	420	23
Souris	"	50	2,064	39	1,000	00
Ballentyne's cove	N.S.	20	1,361	04	861	04
Bayfield	"	40	1,905	89*	952	94
Port Hood island	"	20	1,313	60	656	80
Cheticamp Chapel	"	20	1,277	42*	638	71
Eastern harbour	"	20	1,491	02*	745	51
Ingonish	"	20	1,411	03*	705	51
Gabarouse	"	40	1,982	82	991	41
Petit de Grat	"	20	1,515	95*	757	97
Whitehead	"	15	963	41*	481	70
Port Beckerton	"	20	1,043	08*	521	54
Sambro	"	50	2,246	66*	1,000	00
Port la Tour	"	30	1,380	03*	690	01
Clark's harbour	"	25	1,202	88*	601	44
Lower East Pubnico	"	50	2,016	39*	1,000	00
Sandy cove	"	20	1,427	34*	713	67
Shediac	N.B.....	25	1,210	18*	605	09

* Includes equipment.

During the year 1903, the work went steadily on without interruption, at a little faster rate than usual. Freezers were completed as follows :—

North Rustico, P. E. I., Westport, Digby Co., N. S., North Sydney, N. S., and Ketch harbour, N. S: The first break into the province of Quebec was made at Bonaventure river this year. The reason why we could not introduce the scheme there previously was owing to the local legislature not introducing a bill to incorporate the Association. A bill was introduced in the year 1903, and a start was made there for the first time.

The small freezer erected at North Sydney was found to be inadequate for the wants of the fishermen and was also found to be too far from the fishing ground ; so it was moved to South bay, Ingonish, and extended to 40 tons and a new icehouse constructed so that it is now estimated that it will be fully equiped for another season's operations.

The freezers cost, including equipment as follows :—

Locality.	Province.	Capacity.	Total cost.		Proportion of Government grant.	
		Tons.	\$	cts.	\$	cts.
North Rustico	Prince Edward Island..	20	1,235	00	617	50
Westport	Nova Scotia	30	1,600	00	800	00
North Sydney	"	40	*2,038	89	1,000	00
Ketch harbour	"	20	1,401	89	700	94
Bonaventure river	Quebec	20	1,416	05	916	02

* Includes extensions.

SESSIONAL PAPER No. 22

The winter of 1902-03 was certainly the best winter to get out a supply of ice that we ever had, and with the exception of one or two freezers, a good supply was harvested, so that I had great hopes of making a better showing than previous one. I think it was Robbie Burns who said ‘The best laid plans of bait mice and men gand aft agley.’ It seems a very apt illustration of this case, as there was the greatest scarcity of bait the most of the season, and at times a regular famine. Squid, that were usually plentiful, in the fall and early winter, were very scarce, and only on one occasion could they be got at all. This means quite a loss in many localities, as the haddock fishing industry has developed to a wonderful degree in the past ten or fifteen years.

Since my last report was sent you, new freezers were built at La Have, in Lunenburg Co., St. Peters, C. B., Half Island cove, Guysboro Co., and at Caplin, Que., and some alterations to the freezer at Ingonish to bring it up to date. At the present time, we are now building two more freezers, one at Lockeport, Shelburne Co., and one more at Anse à la Barbe, Co. of Bonaventure, in the province of Quebec. There are hopes that we will at an early date build a freezer at Drum Head, in Guysboro Co., and at Morell, in King’s Co., P. E. I., and several on the Gaspé coast. Several of these were in operation this year and good results were obtained from them. Nearly all of the other freezers were in operation ; the exceptions were Souris, P. E. I., Ballantyne’s cove, Cheticamp Chapel, Gabarus, Lower East Pubnico, and Port La Tour. The last one had got into financial difficulties, and was sold to pay the indebttness.

The cost of those completed with their capacities are as follows :—

Locality.	Province.	Nominal capacity.	Cost.	Proportion of Government grant.
		Tons.	\$ cts.	\$ cts.
La Have.....	Nova Scotia.....	50	2,260 81	1,000 00
St. Peters.....	".....	30	2,036 05	1,000 00
Half Inland Cove.....	".....	30	1,816 87	908 43
Caplin.....	Quebec.....		879 38	439 69
Ingonish.....	Nova Scotia.....	10	193 30*	91 65

* This is only for changes to this one.

The cod fishing industry has been a poor one as far as the catch is concerned. There have been some redeeming features. The price of dry fish has been higher than usual. One great source of trouble is the abundance of dogfish. In some localities they have troubled the fishermen for over five months, and only left the fishing grounds last month.

In my last year’s report, I made mention that Prof. Irving A. Field, of Harvard University, was studying this question, and of the possibility of using it for food, and Mr. H. E. Duff had furnished him with some canned dogfish, but I have not learned how far they have gone or what success has attended his labours. I copy the following in regard to the matter :—

‘Says a Nantucket, Mass., despatch :—What will mean a source of large income to the fishermen, if successful, is the shipping to the New York markets of dogfish, a portion of which, it is understood, is cut into steaks, and sold as a species of whitefish. Heretofore, these fish have been considered a pest, driving off into deep water any smaller fish that may be approaching the shoals near the shore. Some years ago, they were caught with hook and line and sold for their livers, from which a high grade of oil was secured. and the carcasses were then turned over to the farmers, who used them as a fertilizer. During the past summer, and at present, they are hovering around the island shores. They have been captured in large quantities in the blue fish nets. In one instance, there were more than 1,000 in the steamer *Petrel’s* traps in the vicinity of Great Point. There were scarcely any other fish to be found, so Captain Manter, of the steamer, communicated with the New York market, with the result that the following day he shipped to New York several hundred, iced and packed just as mackerel, sculpin or blue fish would be. (*Morning Chronicle*).’

It is to be hoped that some day they may become an article of food, in which case reduction factories would not be required : but until then the fishermen will have to get some help to destroy their greatest and worst enemy.

The following tables show the amount of bonuses earned and paid to the different bait associations during the past four years.

During the season of 1900, four freezers were in operation, but in one, (Port Hood island) a test charge only was made. The total nominal capacity of the three in operation was 70 tons bait and 47 tons frozen, or 67 per cent of the capacity was utilized. In 1901, 13 freezers were in operation, having a nominal capacity of 360 tons and 137·8 tons of bait were frozen, or 38 per cent of the capacity was utilized. The tables showing the bait freezers in use in 1900, 1901, 1902 and 1903, and the bonuses earned by each will be found in last year's report, p. 268.

Name of Station.	Locality.	Number of lbs. frozen.	Bonus on lbs. frozen.	Tons.	Amount.
<i>Season of 1903.</i>					\$ cts.
Frog pond.	Prince Edward island	7,000	7,000	3·5	17 50
Alberton.	"	42,677	40,000	20	100 00
Miminegash.	"	42,725	40,000	20	100 00
North Rustiso.	"	43,000	40,000	20	100 00
Ballantyne's cove.	Nova Scotia	38,100	38,100	19·05	95 25
Bayfield.	"	50,750	40,000	20	100 00
Port Hood island.	"	26,955	26,235	13·47	67 35
North Sydney.	"	37,600	37,600	18·80	94 00
Petit de Grat.	"	40,210	40,000	20	100 00
Whitehead.	"	31,385	31,385	15·69	78 45
Port Beckerton.	"	24,710	24,710	12·35	61 75
Sandy cove.	"	48,888	40,000	20	100 00
Clark's harbour.	"	20,400	20,400	10·20	51 00
Westport.	"	20,600	20,600	10·30	51 50
Shediac.	New Brunswick.	69,000	40,000	20	100 00
Bonaventure river.	Quebec.	40,275	40,000	20	100 00
					1,316 80

The following are the different reports as received from the Bait Association, and will convey to you better than any report of mine what each section is doing.

Frog Pond, P.E.I.—This is the fifth year continuously that this freezer has been in operation. The president sends the following very brief report, as follows :—‘ We put in some 6,000 lbs. fresh herring into the freezer, delivered some 3,700 lbs. to the fishermen. A good deal of netted bait was used this season. Fishermen could not agree on the running of freezer. Kept it going myself, every one that applied got bait as they required.’

Miminegash, P.E.I.—The president of this association reports as follows :—‘ During this season we put into our freezer at Miminegash, over ten tons herring, which we froze in the month of April and early May, and this herring proved a great boom to the fishermen as in the months of May, June and July, when there was no bait to be had, these herring enabled them to get good catches of cod and hake. In the month of October, we froze over ten ton of squid which we disposed of to over late fishermen and exported a lot of it.’

Souris, P.E.I.—The president of this association reports as follows :—‘ Re bait freezer, so called here, I beg to inform you that it has not been operated the past season. Indeed, if an attempt had been made to operate it, owing to the fact that herring have failed to come here as usual, it must have been unsuccessful.’

Ballantyne's cove, N.S.—The secretary of this association reports that there was no frozen bait used at all. There was no ice put up last winter, and that accounts for no frozen bait, but it wont be empty another year, for the fishermen lost terribly on account of having no frozen bait, and fish were very plentiful and impossible to get bait, and when the bait did come, the dogfish were so plenty that it was impossible to get any fish at all.’

SESSIONAL PAPER No. 22

Bayfield, N.S.—The secretary of this association sends the following short report:—Our freezer this season was a great source of benefit to the boat fishermen as well as some bankers who baited with the frozen bait. Herring were plentiful between here and Harbour Bouché in the spring and we froze all we wanted, and after the run of spring herring was over, there was no live bait to be had during the whole season, as there were no mackerel, and were it not for the frozen herring, the fishermen would not have been able to do anything'.

Port Hood Island, C.B.—The president reports as follows:—‘In looking numerous over the past season, I have not got very much to report in regard to this freezer. I filled the icehouse last winter, but I am sorry to say that the ice did not keep very well, it melted all around the sides 3 or 4 feet, notwithstanding the walls being stuffed with straw all around about a foot. I did not start the freezer until November, and even then I only ran 3 or 4 freezing tanks, as the ice would not hold out to keep more than that going until the dogfish would leave, about the last of the month. We could not get any squid to put in the freezer all summer, and on that account the freezer was idle. We could have got some spring herring, but it never pays to freeze them, as they are poor bait when frozen. Mackerel would be all right frozen, but they were too costly to put in at 8 cents a piece. We are at a loss here at not having a trap to catch bait in, and when squid did come, the dogfish were so numerous that we could not secure any with jigs. A few were taken on the shores. We are now importing squid from Mulgrave freezer, and putting them in the freezer here to supply our fishermen.

Cheticamp, C.B.—The president of this association reports that he had secured about 80 tons of ice last winter, expecting to do something, but as the herring fishery has been a failure, none has been frozen for bait. For the want of communication by sea and land, we have been unable to import any frozen fish.

Eastern Harbour C. B.—The secretary of this association, sends the following report:—The staple fishes, such as cod, hake and haddock have given a good general result, although the industry has encountered several impediments to success. The continual breezes peculiar to fall weather, together with the arrival of the dogfish on the shore, have utterly baffled the fishermen in their career. The freezer has done some service in the way of keeping herring available when the clam supply would be exhausted or become, through heat, unfit for use. A few mackerel, through the freezer, have also been available to cod fishing whenever wanted. Nothing very profitable was done until the arrival of squid upon the shore. Squid struck very plentifully and helped the fishermen considerably. If they had to rely upon clams or other bait for the whole season, they would fall quite short in their earnings, and the industry would merely be nominal. There was also placed in the freezer about 4,000 lbs. salmon. Mackerel, as usual, struck the shore, but the dogfish made havoc among them and the fishermen failed to even make a decent capture. The government must certainly do something either in the way of compensating the poor fishermen for their capture of dogfish or devise means for their utter annihilation, as they are largely instrumental in checking the progress of other fishes, and also that of the fishermen. The lobster catch has been quite profitable, and if the season could have been extended a few weeks more, our men would have made an extra season.’

Ingonish, C. B.—This freezer was refitted and the icehouse enlarged and it is now in a first class order for business. The secretary sends the following report:—‘The bait freezer at North bay, Ingonish, was not in operation during the last season. Last winter and spring the directors and stockholders could not agree to stock the freezer with ice, or employ a man to do it. In July, when Mr. Henry M. Rogers, of Boston, came here and found how matters stood, he bought in the fishermen's shares and had the ice room enlarged, and the building painted, and other improvements made, and the freezer is now ready and in good condition to be filled with ice as soon as it can be procured.’

Ingonish, Ferry, C. B.—The secretary sends the following report:—

‘We stored about 450 tons of ice and froze about 35 tons of herring and spring mackerel, which the fishermen were willing to pay a good price for in June or July, or until the dogfish struck, and they did well, in fact, all the fish caught from June 1 until August 15, were caught with frozen baits and imported clams. The dogfish struck

4-5 EDWARD VII., A. 1905

in about August 15 and devoured everything in sight, and the fishermen would not buy bait to feed them with. Since August 15, the fishery at Ingonish has been a complete failure. When the squid struck they would not jig. I think the dogfish made them "uneasy". If a few squid were jigged and gear set, there would be a dogfish on every hook. I have had to close down our business on account of scarcity of cod from August until December.

Gabarus, N. S.—The president of this association reports as follows:—'Replying to yours, November 24, I beg to say that the cold storage for bait at Gabarus last season was not operated. It is, I understand, the intention of the directors to put this plant under different conditions. The place will probably be leased next season to a few individuals, for the purpose of operating it on a sound basis, and for the further purpose of keeping in it a supply of herring for bait, on the line discussed with you on your last visit to Gabarus.'

Petit de Grat, C. B.—The secretary of this association reports as follows:—'In regard to our freezer, we have not had very much chance to use it owing to the scarcity of bait this season, what we have put in has kept in very good condition indeed. Also our ice has kept very well, notwithstanding the very warm summer we have had. Since the repairs made this season, our bait seems to keep even better by far than last season. Our fishermen are beginning to realize the great benefits of having a freezer in the place, and I think another season we will see every man who has a share will have it filled, as he can see what it is to have to buy bait.'

St. Peters, C. B.—This is one of our new freezers, some ice was cut last winter but not enough to do a great deal. The secretary of this association reports as follows: 'After the completion of the freezer, the ice which was stored near Point Tupper, was brought down in cars and put in the freezer in very poor condition. Every precaution was taken to save it, but unfortunately by the time the squid struck in the ice was nearly all melted, so that we only put in about six bbls. of squid, about 1600 lbs., and not having plenty of ice, we could not keep it frozen thoroughly. We sold about half so far. We have everything in good shape for next season's work. Mr. Whitman, of Canso, will use our freezer for two months, if bait will strike in until they finish their own large freezer.'

Half Island Cove, N. S.—This is one of our new freezers also. A quantity of ice was stored last winter and good results have been obtained. The secretary sends the following brief report:—'During the early part of the season, bait was plentiful, but fish was very scarce. Great preparations were made for spring mackerel, but none came of any account. During the first part of July, the dogfish came and were a great bother to the fishermen all summer up till November 15. During August and September, fishermen were idle for lack of bait. During October, few squid came; froze some; cod was very scarce during the summer. Few haddock and herring during the fall, and few mackerel. Taking the season all in all, the catch has been below the average, but has been somewhat made up by fish being a good price. Mackerel ruled very high, and so did cod, haddock and hake. I think the dogfish were worse this year than ever they were here in the bay, fishermen getting their nets eaten up with them.'

Whitehead, N. S.—The secretary sends me the following very short report:—'We have not had a very successful year as bait has been very scarce the greater part of the time, and it was late before bait was obtainable to freeze to any extent, but we have frozen some of late and expect to continue the balance of the season, when ever we can get bait for the purpose.'

Pt. Beckerton N. S.—The secretary says:—'We began to freeze bait as early as May this year when we had a good stock of herring in, these were used to good advantage during June and July. We then got a good supply of squid which came out of the freezer in the very best condition possible, and brought a good price, bait being scarce at that time. In the early part of September, we froze a large supply of small herring, of which not many were used for two reasons; first, they were found to be too fat and consequently would not stay on the hooks, well, we find that poor herring are much better frozen than fat ones, they seem to be tougher, and secondly because of the dogfish being so plentiful, the fishermen would not buy the bait to feed the dogfish, as they put it, and so it left a big stock on hand, and the cost of freezing and storing this

SESSIONAL PAPER No. 22

amount was considerable, which left us in a poor condition financially. I might add that both ice and fish came out of the freezer in better condition this year than ever before, and if the dogfish had not been plentiful, and the codfish so very scarce, we could have had a good season.'

Sambro, N. S.—The secretary of this association sends the following report :—‘ In the winter of 1903, we stored 500 tons of ice and in 1904 100 tons. From this we sold 7 tons and when we started freezing herring on October last, had only ice enough to last 7 days. Can you help us to improve our ice-house as the fishermen are discouraged as it leaks badly.

On October 5	commenced freezing bait.....	10,000 lbs.
“ 6	“ “	6,300 “
“ 7	“ “	7,000 “
“ 8	“ “	10,000 “
“ 10	“ “	9,400 “
“ 11	“ “	8,200 “

This is the first bait we have frozen for two years, and in November, have put out 15,000 lbs., and I expect more or less will be going out next week.”

Ketch Harbour, N.S.— The president of this association reports as follows :— We put in 1,200 cakes of ice last February, and there was no bait until October, and by that time our ice was looking small, but some of the men started to put in some herring and they got quite a nice lot. They weighed some of the crates and then counted the rest. We allowed we had about 21 tons altogether, but they have used quite a lot and find it all right for fishing ; it seemed to be better than squid, but we had to get a lot of ice from Halifax to keep the bait good. If the weather only gets fine, they are expecting to do well with the bait, and if we fill it up this winter with ice, we are going to stow and protect it better to keep it and the share-holders are feeling better satisfied that it will pay. When we get in good running order we intend to make it pay for the future.’

La Have, N.S.—This freezer was built early in the past winter and a good supply of ice was stored. The secretary sends me the following report :—‘ I would beg to say that as far as the working part of the freezer is concerned, it does its work in good style. The great trouble in the earlier part of the season was the procuring of bait : we however managed to get hold of some 100 bbls herring, which we have been disposing of to vessels and small boats sailing out of the river. As Squid were so scarce we were unable to get hold of any at all.”

Sandy Cove, N.S.—This is one of our successful freezers, being under the same management for the past two years. The secretary reports as follows : ‘ I have great pleasure in submitting this my second annual report of the Sandy Cove Fishermen’s Bait Association. During the year we froze fish as follows :—

October 1.....	10,000 lbs.	Herring.
“ 17.....	20,000	“ “
“ 18.....	10,000	“ “
“ 24.....	5,000	“ “
November 4.....	600	“ “
“ 10.....	5,000	“ “
“ 15.....	2,000	“ Codfish.
“ 23.....	3,000	“ Herring.
“ 26.....	5,000	“ “
“ 26.....	500	“ Halibut.

The last of our 1903 stock of herring sold in July, 1904. This bait was put in freezer in December and came out in good condition. We also had 100 crates of frozen squid in freezer, but herring being quite plentiful, we found no sale for them so had them dumped. From July 1 to October 1, we had nothing in freezer. Our first herring this year being frozen October 1, since that time we have kept freezing regul-

arly. We have about 2 tons small halibut in freezer at present. These we buy in small lots from the fishermen here, and we purpose shipping them when supply of other fish is short. We are also freezing large codfish, which we will ship in January as steak cod. We find the fishermen are taking more interest in the freezer this year. Many of them within a radius of ten miles depending entirely on the freezer for their supply of bait. The fishermen of Sandy cove have caught more fish this year than at any time for fifteen years. They all express their satisfaction with the frozen bait and attribute their large catches this year in great measure to having a good supply of fresh bait always on hand.'

Westport, N. S.—The secretary of this association sends the following report:—
'In answer to your communication, am sending a condensed report as near as I can of fish in cold storage this summer. The herring were caught in the spring and used right along. The frozen cod were shipped first of the spring, having been in since February.

No. lbs. herring.....	15,025
“.....	23,476
“.....	5,700
“ frozen cod.....	1,600

Squid were so scarce we could not get any more this fall, had they been plentiful, it would mean a great help to the fishermen in spring.'

Clark's Harbour, N. S.—The secretary of this association sends the following short report:—
'We put in 200 tons ice last winter. We have not frozen any fish this summer, but have iced about ten tons. We could not get a quantity enough at one time, so we iced a little at a time, as the fishermen got them, until there came a larger run. I hope you will be able to secure the bonus for us, as we will fall behind on the cost of putting in the ice. I cannot afford to fill it this winter, so the fishermen will have no ice to fall back on for next year.'

Lower East Pubnico, N. S.—The president of this association reports as follows:—
'Yours received re reports of season's operations in our freezer. I put up ice last winter, thinking to freeze herring but none came around here to freeze, neither were there any squid to freeze, so I have been selling the ice this fall. I will fill the freezer with ice this winter, and be ready for another year if there is anything to freeze. I thought perhaps the Government might put a freezing plant on board a vessel, that could go where squid are, and bring them to freezers where no squid are procurable, as squid cannot be taken any distance to freeze, as they turn red and are no good.'

Shediac, N. B.—This association sends the following report:—
'In reference to the season's operations on our freezer, beg to say the past season has with us been a failure, so far as bait is concerned. Last winter we made provision for handling such bait as we might procure by filling our ice house, which holds about two hundred tons. We however, were unable to procure the usual quantity of spring herring, owing to the failure in the catch due to the ice remaining in the harbour until the run of herring. This fall, the squid were a failure along our shores, the fishermen being unable to procure even the smallest quantity. We are handling at present smelts, but the weather being so cold, immediate shipments are being made, thereby making it unnecessary to use the freezer to any extent. We found the past summer being so hot, our ice melted away considerably, probably one half the quantity was lost. Perhaps this was due to my placing straw over instead of sawdust, as last year, when the waste of ice was almost imperceptible. We shall have the ice house filled again this winter, and trust to having a more succesful season next year.'

Bonaventure River, Que.—The secretary of this association, reports as follows:—
We froze 128 bbls. of spring herring at first of last spring, that we had on hand all season, we finished using it only in October last, we find the bait good, but not so good as the summer herring. We have frozen from August to November 46 bbls. sardines and smelts for bait, and some that we have in the freezer yet. We have frozen too, this

SESSIONAL PAPER No. 22

season, 15,000 lbs cod and other fish whole. The fishing was very poor this season, and also fresh bait, but the fishermen found the frozen bait very good; some of the spring herring was not much good, on account of being frozen at the time they were spawning and at that time the herring is not good for bait.'

'We have used all the ice with 116 bbls. of salt this season, we have hauled a few loads of ice this fall already for the fall use.'

Caplin Que.—This is another of our new freezers and gave very good satisfaction to start with. The president sends the following report:—

'The freezer has been in use during last season and has rendered a great service and satisfaction to the fishermen. There was no other bait to be had, and a large quantity of fish have been taken with the bait from the freezer. Many thanks have been given to the government for the encouragement, by the fishermen, for having built the freezer so as to have a supply on hand at all seasons of the year. There has been about 19 tons of fish frozen during the season. Large quantities of fish have been taken with the frozen bait. Our fishermen are still fishing and taking 4 to 5 drafts a day, something unusual at this season of the year.'

Alberton, P.E.I.—The president of this association begs leave to report as follows:—
'We began putting in fresh herring in the bait freezer in April, and got them frozen in fine condition. In June, the fishermen began using the bait with good results, as fresh bait was very scarce, and this season proves clearly the great benefit of the bait freezer. Next season, we expect to run the full capacity and will require extra ice accommodation, as our freezer will only hold one hundred tons of ice, and we will require nearly as much more space. The fishermen are now fitting out to carry the frozen bait on their boats in a proper way. Each year will develop the increasing importance of this great boon to the codfishery. I trust that our work for the season of 1905 will clearly prove the value of educating the fishermen to the use of cold storage.'

Rustico, P.E.I.—The secretary of this association sends the following report:—
About the last of January, we had our annual meeting after the business of the last year was transacted and certified by the association, all the fishermen agreed to give aid in filling up the ice-house with ice. However, we were fortunate in procuring sufficient quantity of ice. Herring struck in about the last of April, when we procured all the bait required. I regret to say owing to the prevalence of dogfish around our coast, and other kind of bait easily procured, we did not use a large quantity of frozen bait, but we have all confidence that the freezer is a benefit to fishermen and this place generally.'

Remarks

Reviewing the past season's operations, I am quite satisfied that it was the best opportunity to get supplies of ice, and with the exception of some of the new ones, a good supply was put up. I regret very much the reported losses of ice by some of the associations, especially Sambro, Ketch harbour and Port Hood island. It seems strange that some report very little loss, while it must be carelessness, or perhaps some defect that should be attended to without any delay, that causes these other associations so great a loss. There was in most localities, a very great scarcity of bait, except the Gaspé coast, where the Bay des Chaleurs seemed to be teeming with herring last spring. Squid were also very scarce this fall, and very few have been frozen. Some of those frozen have not kept extra well either. The prevalence of the dogfish had the effect of rather a small catch of cod and hake etc. The price of fish has somewhat made up for the short catch generally. The following item from the Morning Chronicle expresses the above views of mine quite fully. So far as can be ascertained the last of the Newfoundland dry fish vessels have arrived. There have also been several small lots from our own coast which pretty well clean up all the available lots east of Halifax. These fish they hold at \$5.50 to \$5.75 according to quality. There have been several arrivals of bank fish from Lunenburg, some of which were bought several weeks ago at \$5.25. Within the past week it is understood that Mahone and Lunenburg Exports have bought freely at \$5.45 on spot. This is equal to \$5.55 here.

4-5 EDWARD VII., A. 1905

Very few fares from the Lunenburg fleet now remain unsold and it looks as though January first of the year 1905 would have the remarkable distinction of seeing no fish remaining unsold in the hands of the fishermen. Advices from St. John's, Newfoundland go to confirm the statement recently published, that the stocks of all fish on that market are below those of last year, which in turn were lower than for some years past. The situation, therefore, may be regarded as very strong, and it looks as though the highest price in the history of the business would be obtained between now and the spring. About a week ago the herring market showed signs of weakness, but owing to the heavy demand from Boston and other markets, sales have been very heavy and the market is again strong at \$2.75 for Newfoundland. Stocks of mackerel, with the exception of are very light; in fact the total stocks on this market are supposed to be very small. The spring No. 3s were at \$9.00.

There has been considerable demand for alewives during the past week or ten days, and the market is very firm, St. John, New Brunswick dealers are now asking \$4.50 delivered here. Several lots of smoked herring have come in by water from New Brunswick in the past few days and free offerings by rail from smokers of that province have put prices down to seven cents per box. This is a decline of fifty per cent. within the past 30 days.

The tone of all export markets is very strong for all grades and the outlook for the trade is very encouraging.

The lobster catch was a very good one, and fair prices paid so that the fishermen did fairly well on the whole season.

The mackerel fishing generally was not very good this year as far as the catch was concerned, but prices are very high, that is, the usual course of events. I herewith submit what a Bangor paper has to say on this topic, entitled "Mackerel Season a Failure."

'Bangor, Me., Nov. 14. The mackerel fishing season on the North Atlantic coast, which ended this month, has been an almost complete failure. Not for years have the fish been so scarce, and never has the price been so high. No fish have been taken in the Bay of Fundy, and few on the Maine coast, which is generally the great mackerel ground. As the season advanced and fish became scarcer, prices soared high, until as much as \$20 a barrel was paid, and in some instances even \$25 and \$30. At present the average price is about \$16 a barrel.'

The owners of vessels have lost thousands of dollars in fitting out for fruitless voyages, and the fishermen, who usually make \$400 to \$600 in shares, have little or nothing to show for their season's work. Dealers and vessel owners agree that the season has been the poorest in eight years. Many of the mackerel schooners will go into other lines of fishing next year.

The large commercial freezer at Canso, N.S., to supply the bankers and others with bait, is drawing near completion, and will be ready for another year, and it is to be hoped it will supply a long felt want. As in former years, some of the freezers have given very excellent results, while others with different management have had only fair success, while others have been idle for the want of someone to take hold of them, and run them properly. But I suppose this is to be expected. The idea is an excellent one, but the details as to management are at fault: sometime the regulations may be changed to suit the condition of the people.

The whole most respectfully submitted.

I have the honour to be, sir,
Your obedient servant,

PETER MACFARLANE.

SESSIONAL PAPER No. 22

APPENDIX No. 13.

REPORT OF THE FISHERIES PROTECTION SERVICE OF CANADA

FOR THE SEASON OF 1904.

BY COMMANDER O. G. V. SPAIN, R. N.

OTTAWA, December 22, 1904.

To the Honourable

The Minister of Marine and Fisheries.

SIR,—I have the honour to report on the work of the Cruiser Fleet looking after the protection of the fisheries on the Atlantic coast, the Great Lakes and the Pacific coast. I also append a report of the Fisheries Intelligence Bureau. The vessels pertaining to this fleet, under my command, for the past season, were as follows:—

Curlew, Captain Pratt;
Osprey, Mr. Graham;
Kingfisher, Captain Kent;
Constance, Captain May;
La Canadienne, Commander Wakeham.
Petrel, Captain Dunn;
Kestrel, Captain Newcombe.

In addition to this two new cruisers, with a speed of 21 miles per hour were built. One for the Atlantic coast to take the place of the *Acadia*, and one for the Great Lakes to take the place of the *Petrel*. A full report of all these ships, their armments, crews, engines, &c., will be found in the Marine Report.

The patrols of these vessels during the past season, were as follows:—

The *Osprey* on the south-east coast of Nova Scotia and Cape Breton, from Liscombe to Sydney.

The *Kingfisher* on the Prince Edward Island coast. This vessel, after thirteen years' service, has been condemned, and is now for sale. Her place on the Atlantic coast will be taken by the coast cruiser *Petrel*, lately employed on Lake Erie.

The *Curlew* in the Bay of Fundy.

La Canadienne, as usual working independently of the rest of the fleet, under the charge of Commander Wakeham, who is the officer in charge of the Gulf division of Fisheries.

Constance, in the River and Gulf of St. Lawrence and Nova Scotia coast. This vessel is managed by the Customs Department, in everything regarding her movements, and is under the charge of Inspector Fred. L. Jones.

4-5 EDWARD VII., A. 1905

Petrel.—This vessel has been employed on Lake Erie, and she has been found too slow to cope with the steam tugs used by the United States fishermen, on the upper lakes, and the *Vigilant* has been built to take her place.

Kestrel.—This vessel is employed in British Columbia waters for the protection of the fisheries, and has done good work under Captain Newcombe, not only with regard to the fisheries, but also in locating fishing banks off the coast. The information gathered by him has proved of great value to the department.

Falcon, is a small steamer also employed in the protection of British Columbia fisheries under Inspector Williams.

Detailed reports from these officers, giving a synopsis of their work during the past season will be found attached.

In addition to the above there are four sea-going patrol steam launches which are used for looking after the carrying out of our own laws by our own fishermen, especially in regard to lobster protection. One of these launches is stationed in the Bay of Fundy, one on the Nova Scotia coast, one on the Cape Breton coast, and one between Prince Edward Island and Magdalen Islands.

They have all done excellent work and proved of invaluable assistance in connection with the different cruisers. They have been officered and manned from the cruisers *Kingfisher*, *Osprey* and *Curlew*. One of these patrol boats will be stationed during the next season entirely at Magdalen Islands.

I have the honour to be, sir,
Your obedient servant,
O. G. V. SPAIN,
Commanding Marine Service of Canada.

List of United States Fishing Vessels to which Licenses were issued under the Act, intituled 'An Act respecting Fishing Vessels of the United States of America, during the year 1904.

Name of Vessel.	Port of Registry.	Tons.	Port of Issue.	Fees.
				\$ cts.
Senator.....	Gloucester, Mass....	74	Canso, N.S.....	111 00
Gladys and Sabra	Salem, Mass	50	Liverpool, N.S.....	75 00
Ellen C. Burke.....	Boston	60	Shelburne, N.S.	90 00
Elizabeth M	Bucksport, Me.....	102	Yarmouth, N.S.	153 00
Valkyria.....	Gloucester, Mass.	104	"	156 00
Robin Hood.....	"	65	Lockeport, N.S..	97 50
Hiram Lowell.....	"	95	Yarmouth, N.S.....	142 50
Parthia	"	77	Barrington, N.S.	115 50
H. F. Whittin	"	92	Pubnico, N.S.....	138 00
Elector	"	84	"	126 00
A. E. Whyland	"	96	"	144 00
Masconomo.....	"	67	"	100 50
M. D. Hines.....	"	92	"	138 00
Norma	"	77	Liverpool, N.S.....	115 50
Harry A. Nickerson.....	Booth Bay, Me.....	83	Yarmouth, N.S.	124 50
Georgie Campbell.....	Gloucester, Mass....	78	"	117 00
Blue Jacket.....	"	86	"	129 00
Essex.....	"	84	Tusket, N.S.....	126 00
Horace B. Parker	"	62	"	93 00
Lucinda I. Lowell.....	"	77	"	115 50
Carried forward.....				

SESSIONAL PAPER No. 22

LIST of United States Fishing Vessels to which Licenses were issued—*Concluded.*

Name of Vessel.	Port of Registry.	Tons.	Port of Issue.	Fees.
				\$ cts.
Brought forward				
Wm. E. Morrissey.....	Gloucester, Mass.....	93	Tusket, N.S.....	139 50
Alice R. Lawson	"	85	"	127 50
Henry M. Stanley.....	"	83	"	124 50
Arabia.....	"	86	"	129 00
Madonna	"	79	"	118 50
Bohemia	"	86	"	129 00
Orpheus	"	73	"	109 50
Hazel R. Hines	"	79	"	118 50
Loring B. Haskell.....	Boston, Mass.....	67	Digby, N.S.....	100 50
L. A. Munro.....	Gloucester, Mass.....	84	Pubnico, N.S.....	126 00
Effie M. Morrissey	"	83	"	124 50
Sceptre	"	91	"	136 50
John L. Nicholson	"	92	Yarmouth, N.S.....	138 00
Columbia	"	89	Pubnico, N.S.....	133 50
Dora A. Lawson	"	93	Liverpool, N.S.....	139 50
Senator Gardner.....	"	94	Pubnico, N.S.....	141 00
S. P. Willard	"	87	"	130 50
J. J. Flaherty.....	"	124	Tusket Wedge, N.S.....	186 00
Maggie and May.	"	88	Yarmouth, N.S.....	132 00
E. E. Wetherell.....	"	81	Lockeport, N.S.....	121 50
Margie Turner.....	Booth Bay, Me.....	44	Yarmouth, N.S.....	66 00
Maxime Elliott.....	Gloucester, Mass	75	"	112 50
Samuel, R. Crane	Salem, Mass	52	Thornes Cove.....	78 00
Margarett.....	Beverly, Mass	107	Tusket, N.S.....	160 50
Hazel Oneita.....	Gloucester, Mass.....	73	Yarmouth, N.S.....	109 50
Massachusetts.....	Duxbury, Mass.....	102	Canso, N.S.....	153 00
Gacoma.....	Gloucester, Mass.....	71	Halifax, N.S.....	106 50
Arbitrator	"	72	Pubnico, N.S.....	108 00
F. B. Attwood.....	Boston, Mass.....	82	"	123 00
Bertha D. Nickerson	Booth Bay, Me	89	Shelburne, N.S	133 50
Caroline Vought	Vinal Haven, Me....	48	Yarmouth, N.S.....	72 00
Squanto.....	Duxbury, Mass.....	95	Canso, N.S.....	142 50
Helen G. Wells	Gloucester, Mass.....	66	North Sydney, N.S.....	99 00
Harvard	"	76	"	114 00
Illinois.....	"	78	Halifax, N.S	117 00
Quickstep.....	Boston, Mass..	75	Digby, N.S	112 50
Nannie C. Bohlin	Gloucester, Mass.....	96	Shelburne, N.S.....	144 00
Jennie B. Hodgdon	"	85	North Sydney, N.S.....	127 50
Arkona	"	97	Port Hawkesbury, N.S....	145 50
Olga.....	"	77	Canso, N.S.....	115 50
Edith McIntyre.....	Booth Bay, Me.....	96	Shelburne, N.S.....	144 00
Golden Rod.....	Gloucester, Mass.....	98	Port Hawkesbury, N.S....	147 00
Moomeen	"	83	Pubnico, N.S.....	124 50
Irene and May.....	Boston, Mass.....	62	North Sydney, N.S.....	93 00
Gov. Russell.....	Provincetown, Mass.....	129	Port Hawkesbury, N.S....	193 50
Judique	Gloucester, Mass	89	Pubnico, N.S.....	133 50
Nellie Dixon.....	Boston, Mass.	68	Canso, N.S.....	102 00
Anna L. Sanborn	Beverly, Mass.....	17	Yarmouth, N.S.....	25 50
Ada K. Damon.....	Provincetown, Mass.....	67	River Bourgeois, N.S....	100 50
Levanter.....	Vinal Haven, Me....	27	Yarmouth, N.S.....	40 50
James R. Clark	Salem, Mass.....	43	"	64 50
Gladstone	Provincetown, Mass.....	74	St. Peters, N.S	111 00
Lizzie Maude	Vinal Haven, Me....	48	Yarmouth, N.S.....	72 00
Bertha May.....	"	47	Pubnico, N.S.....	70 50
Somoset	Duxbury, Mass	18	Arichat, N.S.....	27 00
David Sherman	Gloucester, Mass.....	47	Yarmouth, N.S.....	70 50
Wm. H. Rider.....	"	45	"	67 50
T. M. Nicholson.....	Bucksport, Me....	90	St. Peters, N.S.....	135 00
Agnes V. Gleason	Gloucester, Mass.....	44	Shelburne, N.S	66 00
H. W. Homans.....	"	43	Souris, P.E.I.....	64 50
Total.....		6,137		9,205 50

4-5 EDWARD VII., A. 1905

LIST of French Fishing Vessels calling at Canadian Ports during the Season of 1904.

Date.	Name of Vessel.	Port of Registry.	Master's Name.	Ton- nage.	Men.
1904.					
July 20	Adele	St. Pierre...	Porrier.....	12	6
" 25	"	"	"	12	6
Aug. 17	Amelie	"	Redenman	57	18
Oct. 12	Adele	"	Porrier	12	6
May 5	Alliance	"	Devine	35	16
" 5	Ampritite	"	Mouse	43	18
" 6	Active	"	LeRoy	72	25
" 9	Aganaise	"	Pafsasm	44	15
" 9	Arciais	Pampol	Harzin	80	25
" 17	Amelie	St. Pierre	Crocket	32	14
" 20	Alliance	"	Devine	35	15
" 23	Anita	St. Malo	Lanport	50	18
" 27	Antoinette	St. Pierre	Constantin	47	18
" 30	Ampritite	"	Mouse	43	19
Oct. 3	Annie	"	Levoisey	42	16
May 14	Albert Robert	"	Joselin	42	16
Aug. 3	Breeze	"	Jevoux	25	10
May 6	Blanche	"	Huellen	54	20
" 9	Bransea	"	Mattus	59	20
" 13	Batavia	St. Malo	LeMouse	59	22
" 23	Blanche	St. Pierre	Galland	54	20
Oct. 12	Catherine	"	Delorance	21	11
May 16	Charmeuse	St. Malo	Penceneau	149	32
" 5	Denanse	St. Pierre	Deschamps	29	15
" 9	Dictator	"	Gasse	40	16
" 9	Decide	"	Cashet	38	13
" 25	"	"	"	38	13
July 27	Emelie	"	Moulton	57	19
May 4	Eshaldona	"	Breau	45	16
" 13	Edele Amelie	"	Pucliffett	40	18
" 18	Emely T	"	Enevault	55	21
Sept. 19	Emely Audrin	"	Bechot	119	16
Oct. 6	Freres & Sœurs	"	"	50	15
May 6	Fauvette	St. Servan	LeRoy	78	25
" 18	Flora	St. Pierre	Pingault	52	15
" 14	Fauvette	St. Servan	LeRoy	78	25
July 28	Gorandon	St. Pierre	Maillard	32	17
" 20	George & Paul	"	Referneau	39	18
" 25	"	"	"	39	18
Aug. 1	"	"	"	39	18
May 3	Gorandon	"	Maillard	32	17
" 4	George & Paul	"	Referneau	39	16
" 9	Grand Master	"	Boule	59	19
" 10	Genevieve	"	Panchard	52	19
" 11	Georges	"	Chanut	29	16
" 23	"	"	"	29	16
" 9	Gustave Prosper	"	Oleriau	35	16
" 6	Helma	"	Leagon	36	16
July 31	Joseph Maria	"	Kason	26	12
May 5	Jean Aristide	"	Aunce	30	13
" 9	Jean Auchu	"	Gresel	37	16
" 9	Joseph Rosalie	Granville	Delarvau	82	24
" 10	Jean Maurice	Bayone	Allin	53	23
" 12	Joseph Antonia	St. Pierre	Burgeos	36	15
" 14	Jennette	"	Hemot	33	17
" 16	Jean Augusta	"	Cuses	33	14
" 20	Jenvin Bertha	"	Leclair	41	17
" 21	J. L. C.	"	Criet	58	19
June 6	Joseph Antonia	"	Burgeos	36	16
July 26	Jenvin	Nante	Bain	30	17
Oct. 3	Joseph Antonia	St. Pierre	Burgeos	36	16
May 13	Jean Baptist	"	Gerault	52	20
Oct. 19	Landsur	"	Bechet	50	10
May 5	La Tour d'Ager	Granville	Boudrot	74	23
" 5	Leone Amelia	St. Pierre	Buchau	28	16
" 5	La Tour de Pin	Houle	Jursele	50	18
" 6	La Seine	St. Pierre	Cadour	46	17
" 9	Lorrian	"	Austeau	44	18

SESSIONAL PAPER No. 22

LIST of French Fishing Vessels calling at Canadian Ports, during the Season of
1904—*Concluded.*

Date.	Name of Vessel.	Port of Registry.	Master's Name.	Ton- nage.	Men.
1904.					
May 10.	La Britteau	Granville	Pelerforsey	58	22
" 13.	La Normandy	St. Pierre	Hesben	43	18
" 16.	Lea Maria	"	Maher	46	29
" 23.	La Tour de Pin	Houle	Jennet	50	18
June 6	"	"	"	50	18
Sept. 23.	Landoise	St. Pierre	Bechet	42	13
July 25.	Maurice	"	Lafitte	39	16
April 12.	Maria	Bayone	Thesso	53	14
May 4.	Marie Antoinette	St. Pierre	Constantin	47	16
" 4.	Marie Augustine	"	Lesay	31	16
" 4.	Madeline	Bayone	Lafleur	57	18
" 6.	Marietta	St. Pierre	Lavestie	44	16
" 9.	Michel Etienne	"	Nichol	30	15
" 10.	Maria Augustin	"	LeRoy	31	16
" 11.	Maria Thurso	St. Pierre	Faucher	45	22
" 12.	Malouse	"	Massey	52	21
" 14.	Maria	Bayone	Ehersied	53	21
" 30.	Maryanne	St. Pierre	Chine	39	17
" 31.	Manlieu	"	Maurice	52	21
Nov. 12.	Normanda	"	Constantin	59	21
May 4.	"	"	"	59	21
" 9.	Noel	"	Martin	45	20
" 9.	Nevada	"	"	27	14
" 9.	Neptune	"	Roger	53	20
" 10.	Navara	St. Malo	Lefleur	202	33
" 14.	Notre Dame L. Garde	Granville	Nobles	87	25
" 23.	Noa Coven	Paimpol	Dugas	64	22
" 28.	Navada	St. Pierre	Mouton	27	14
" 30.	Normanda	"	Constantin	59	21
July 21.	"	"	"	59	21
Sept. 12.	"	"	"	59	21
July 21.	Orfainna	"	Bourgeois	15	10
May 5.	Pauser	"	Michet	53	21
" 6.	Pyrusin	"	Comnettier	39	16
" 11.	P. F. 22	Brest	Bransard	31	14
" 11.	Perreauch	St. Pierre	Lereaux	49	15
" 13.	Puise	"	Noslin	25	10
" 16.	Paul Maria	"	Foucault	33	16
" 19.	P. F. 2	Brest	Lancas	40	16
" 24.	Pacific	St. Pierre	Coglin	78	21
Sept. 12.	Pandora	"	Lanfordca	36	17
" 16.	Rejolette	"	Mantange	62	21
July 23.	Runar	"	Porrier	36	21
Aug. 1.	"	"	"	36	21
Sept. 28.	"	"	"	36	21
May 4.	Rose L.	"	Cavalier	44	17
" 6.	Recuse	"	Beacham	37	18
" 9.	Rose	"	Corrice	91	25
Nov. 23.	Sapho	"	Mantgen	55	18
May 5.	St. Anin	"	Grogen	47	16
" 5.	St. Roach	"	Mouton	42	18
" 6.	Stormanza	"	Seaveray	34	16
" 9.	St. Martin	"	Porrier	68	19
" 11.	Senator	"	Thilent	41	16
" 19.	St. Roach	"	Mouton	42	18
" 23.	St. Martin	"	Porrier	68	19
" 23.	St. Clair	"	Lebreau	39	15
Sept. 3.	St. Martin	"	Porrier	68	21
" 9.	St. Roach	"	Mouton	42	18
" 10.	Sen-ition	"	Cambresin	57	16
May 14.	Severence	Bordeaux	Ruffett	119	22
" 6.	Tiguelonie	"	Hormach	34	16
" 11.	Tule	Paimpol	Peance	62	15
" 14.	Terre Nova	St. Pierre	Pincent	58	15
" 14.	Union	"	Merdentle	"	"
" 4.	Vigilant	"	Youtreos	48	19
" 16.	Xonophin	"	Cuses	33	14
" 4.	Yoomette	"	"	46	16
" 10.	Wailia	"	Foubet	36	14

LIST of United States Fishing Vessels which have entered Canadian Ports for the year ending October 31, 1904, &c.—Continued.

Number.	Name of Vessel.	Net tonnage.	Number of men.	Arichat.	Barrington.	Ganuso.	Georgetown, P. E. I.	Halifax.	Liscombe.	Liverpool.	Lockeport.	Louisburg.	Lunenburg.	North Sydney.	Port Hawkesbury.	Port Hood.	Port Mulgrave.	Shelburne.	Souris, P. E. I.	Whitehead.	Yarmouth.	Total entries.
126	James A. Garfield	50	16	2																		2
127	James R. Clarke	43	16																		3	3
128	James S. Steele	50	16							3											1	4
129	Jennie B. Hodgson	85	19			1				1				2				3				5
130	John J. Flaherty	124	27			1												2			3	6
131	John L. Nicholson	92	18			1								1				1			1	4
132	John M. Keen	61	14															1				1
133	John M. Plummer	95	18					3									1					4
134	Joseph W. Luftkins	80	18							1					1			3				5
135	Joseph Warren	49	15	1																		1
136	Jubilee	93	20	1		1			3	2	1							2			4	14
137	Judique	89	20			1			2					1				1			3	8
138	Juniata	47	17															1				1
139	Kentucky	91	20			1			2	1								5				9
140	Kernwood	54	16							1								1			1	3
141	L. B. Haskell	67	16																		9	9
142	Latona	71	18															2				2
143	Lawrence A. Munro	84	19			1		1	2	1		4		1							3	13
144	Lawrence Murdoch	42	12															1				1
145	Lemaset	18	8	1										1			1		1			4
146	Lena and Maud	75	18			2		3						3						2		10
147	Levanter	27	12																		3	3
148	Lewis H. Giles	95	18			1		1				1		3				1				7
149	Lizzie Maud	48	18																		3	3
150	Lizzie M. Stanley	92	20			1												1				2
151	Lorna Doon	48	13															2				2
152	Lottie G. Marchant	79	19			1		2						1	1					1		6
153	Louisa Polleys	79	17	2														1		1	1	5
154	Lucinda I. Lowell	77	18	1				1				1		2							2	7
155	Mabel D. Hines	92	18						2			3		1							3	9
156	Madonna	79	18			4		1						2	1			1			2	11
157	Maggie & May	88	18											3				1			3	7
158	Maggie Sullivan	123	24			1						1						1				3
159	Manhasset	76	23																		1	1
160	Manomet	43	16					1													1	2
161	Margarett	107	18			1						1						2		1	2	7
162	Marguerite	79	18			2		1		4												7
163	Marion Turner	45	14							1								5			3	9
164	Mary A. Gleason	65	16							5								2				7
165	Mary E. Harty	77	18											2							1	3
166	Mary F. Curtis	85	21	1					1	1								3				6
167	Mary G. Powers	133	26					1		1						1						3
168	Mary T.	50	16															1				1
169	Maryland	86	18						2			1										3
170	Masconoma	96	18			1						1						1			2	5
171	Massachusetts	102	21			3			1	6		1										11
172	Massasoit	32	8																		1	1
173	Matchless	73	18																		1	1
174	Mathew Keaney	47	12							1												1
175	Matilda J. Nelson	78	18					3														3
176	Maud M. Story	53	11															1				1
177	Maud S.	44	14																		1	1
178	Maxime Elliott	75	18								2			1							2	5
179	Metamora	81	23	1					1									3			2	7
180	Meteor	96	18			1											1	1			1	4
181	Mina Swim	60	18		3																	3
182	Minerva	47	12								1											1
183	Miranda	76	18									1		1								2
184	Mizpah	52	14						1													1
185	Monarch	92	20			1					2			1								4
186	Monitor	100	23			1		1										1			1	4
187	Mooween	83	20	1						1					1			1			2	6
188	Movanam	82	22															2			1	3

SESSIONAL PAPER No. 22

LIST of United States Fishing Vessels which have entered Canadian Ports for the year ending October 31, 1904, &c.—*Continued.*

Number.	Name of Vessel.	Net tonnage.	Number of men.	Ariehat.	Barrington.	Canso.	Georgetown, P.E.I.	Halifax.	Liscombe.	Liverpool.	Lockeport.	Louisburg.	Lunenburg.	North Sydney.	Port Hawkesbury.	Port Hood.	Port Mulgrave.	Shelburne.	Souris, P.E.I.	Whitehead.	Yarmouth.	Total entries.
189	Mystery . . .	89	18									1										
190	Nannie C. Bohlin	96	21							3				1	1		1	4				10
191	Natalie B. Nickerson . .	68	20									3									1	4
192	Natalie J. Nelson. . . .	78	19			1	1											3			1	6
193	Navahoe	91	20					1														1
194	Nellie Dixon	68	19			3				1								3		1	4	12
195	Nellie G. Davis	36	13										1									1
196	Nellie M. Snow	61	16												1							1
197	Nelson Y. McFarland . .	65	10			1																1
198	New England	59	16			1																1
199	Niagara	78	18															1				1
200	Norma	77	18			1				3				4						1		9
201	Norumbega	91	18																		1	1
202	Nourmahal	86	18			1																1
203	Olga	77	20			1	3			2		1						2			1	10
204	Olympia	50	17	4														4			1	9
205	Oregon	79	18			1				1								2				4
206	Orinoco	88	20					1		2		1						4				8
207	Orpheus	73	18							1		1		1							4	7
208	Paragon	88	20															2				2
209	Parthia	77	18	3		3				1		3		1				2			1	14
210	Patriot	58	12			1																1
211	Pinta	68	18							1												1
212	Preceptor	89	20				1	1									1	4				7
213	Priscilla Smith	89	18			1	3			1				4							1	10
214	Puritan	62	16			1				1												2
215	Pythian	45	14							1											1	2
216	Quannapowitt	76	21	1																		1
217	Quick Step	75	20																		12	12
218	Ralph E. Eaton	64	15	1						1											1	3
219	Ralph F. Hodgdon	59	17			1	1								1		1				1	5
220	Ralph H. Hall	90	18			2	1					1		1								5
221	Ralph Russell	48	18				1							1								2
222	Reinco	83	18															1				1
223	Rena A. Percy	46	14							1	1											2
224	Richard Lester	47	17																		1	1
225	Richard Wainwright . . .	98	20			3		2						1						1	1	8
226	Rigel	87	18				1	1		1								1				4
227	Rival	91	19									1										1
228	Robert C. Hains	16	13			1									1		1					3
229	Robin Hood	65	16	1						1	1	1		1								5
230	S. F. Maker	78	18			1	4							1								6
231	S. P. Willard	89	18	1						2		1		1				2		2	2	11
232	Saladin	89	19											2								2
233	Samuel R. Crane	78	18															3			10	13
234	Sceptre	91	18			2						1		3							2	8
235	Scotia Queen	108	15																		1	1
236	Seacornet	40	16			1												1			1	3
237	Senator	74	18			3						1						1				5
238	Senator Gardener	96	15			1							1	1							2	5
239	Sheffeyld	61	17	2																	1	3
240	Shenandoah	77	18			1															2	3
241	Slade Gorton	88	23			1		2		2												5
242	Smuggler	91	18			1				1		6										8
243	Speculator	77	18							1								1				2
244	Squanto	95	18	1		3						1										5
245	T. M. Nicholson	90	20															2				2
246	Tacoma	71	18	1		3	2		1						1		1			1		9
247	Tattler	135	20												1		1					2
248	Thalia	78	14															2				2
249	Theodore Roosevelt . . .	90	18			2	1											1				4
250	Thomas Brundage	69	17																		1	1
251	Thomas M. Knight	62	15	4																	1	5

List of United States Fishing Vessels which have entered Canadian Ports for the year ending October 31, 1904, &c.—*Concluded.*

Number.	Names of Vessel.	Net tonnage.	Number of men.	Archat.	Barrington.	Cause.	Georgetown, P.E.I.	Halifax.	Iscombe.	Liverpool.	Lockeport.	Louisburg.	Laurelburg.	North Sydney.	Port Hawkesbury.	Port Hood.	Port Mulgrave.	Shelburne.	Souris, P.E.I.	Whitehead.	Yarmouth.	Total entries.
252	Titania.	77	18					1		2								1				4
253	Valkerie.	104	18				1							3							2	6
254	Vendetto.	93	16							1												1
255	Vera.	79	18					1			1							2				4
256	Vesta.	75	16																		4	4
257	Victor.	75	18			2		4	2					3								11
258	Vida McKown.	83	19			1								1								2
259	Vigilant.	87	18					1		1			1									3
260	W. B. Nickerson.	68	20											1								1
261	W. E. Morrissey.	93	18					1	2					2	2		2				2	11
262	W. H. Cross.	41	17		3																2	5
263	W. H. Moody.	48	13			1		1			2											4
264	W. L. Newton.	92	16												1		1					2
265	Walter M. Young.	96	16												1		1					2
266	Wilber L. Swift.	69	17					1														1
267	Wilfred V. Nunan.	43	14																		3	3
268	William H. Rider.	45	16		2																7	9
269	Winnifred.	60	18															1				1
270	Yakima.	71	18		1					1	1											3
Totals.		20246	4724	10	50	133	2	89	60	124	19	87	9	112	29	1	15	192	4	15	268	1219

SESSIONAL PAPER No. 22

ANNEX A.

OFFICERS' REPORTS

REPORTS OF THE COMMANDERS OF CRUISERS.

CRUISER 'OSPREY.'

CANSO, N. S., November 26, 1904.

To Commander O. G. V. SPAIN, R.N.,
Commanding Canadian Marine Service,
Ottawa.

SIR,—I beg to submit to you the annual report on the work done by the Cruiser *Osprey* during the season of 1904.

May 1, I joined the ship at Shelburne as 1st Officer, Captain C. T. Knowlton in command. Had ship fitted out, sails bent and all stores taken on board.

May 4, Captain Knowlton commissioned ship, and signed on crew. P.M., unmoored ship and anchored in the stream. 5th, weighed anchor and proceeded to sea, cruising eastward, 4 p.m., off La Have, calling at Sheet Harbour, Liscombe, and Isaac's Harbour, arriving at Whitehead on the 18th. We continued cruising between Point Michaud and Liscombe until May 28, when we fell in with the United States seining fleet, consisting of twenty-five sails. Continued in company with the fleet until June 6, when we saw the last of the United States seiners start for home.

I may mention here that all the United States seiners made good fares of mackerel this spring, one vessel having 400 barrels salt and 300 barrels fresh mackerel for her share.

June 10, arrived in Isaac's harbour to change sails, unbent new sails and put them ashore in warehouse, and bent second sails. 14th., proceeded again, cruising on our station until June 29—arrived at Canso, where Captain Knowlton received instructions from you to proceed to England to take command of the D. G. S. *Canada*, and giving the undersigned command of the *Osprey*.

June 30, a.m., Captain Knowlton and Gunner Lyons left the ship at Canso. P.M., weighed anchor and proceeded to cruise on our station, visiting the various lobster factories and attending to the different duties in connecting with the fisheries.

July 9, arrived at Port Hawkesbury, having had previous instructions from you to put ship on marine slip. Had ship cleaned and painted, and put two sheets of metal all along the water line. July 13, having finished work on marine slip, floated ship and proceeded back on our station and attended to the various duties. 18th, proceeded to sea again, arriving back on our station on the 19th, and continued cruising between Point Michaud and Sheet Harbour. 29th, called on Port Hawkesbury where Mr. Grant (tailor) came on board and measured for uniforms.

October 1, proceeded again on our station. During the close season for lobsters here, we destroyed about 150 traps and 4 cars, in the vicinity of Sober island and about 100 traps in the vicinity of Dover. With this exception, I found the close season well observed on this station. The season's catch of lobsters, on this station, would be about an average catch. The fall catch of mackerel has been a failure, both as regards seiners and shore fishermen. With regard to the cod fisheries, both the bankers and shore fishermen made small fares, but the extremely high prices will help to make good the loss due to the small catch.

4-5 EDOUARD VII, A. 1905

Scarcity of bait has been the great drawback, both to the bankers and shore boats, but with the fine cold storage plant lately erected at Canso, the prospect for the future looks much better. The herring catch on this coast has been small this season, with the exception of Arichat, where they have done fairly well.

November 18, received orders to proceed to North Sydney where we arrived on the 20th, calling at Poulamond and Louisburg on the way. November 22, received orders to proceed to the westward, calling at the various ports on the way, and to be at Shelburne about the first week of December to pay off.

November 23, proceeded to sea, cruising along the south coast of Cape Breton, calling at Arichat and arriving at Canso on the 26th.

I have the honour to be, sir,

Your obedient servant,

JOHN GRAHAM,

Officer in charge of the 'Osprey.'

GOVERNMENT CRUISER 'KINGFISHER,'

GRAND MANAN, N.B., December 7, 1904.

To Commander O. G. V. SPAIN, R.N.,

Commanding Marine Service of Canada.

SIR,—I have the honour to submit to you my annual report of work performed by the Dominion cruiser *Kingfisher* under my command, in the Fisheries Protection Service, also patrol boats Nos. 1 and 3, for the season 1904.

By your order I proceeded to Shelburne, N.S., on April 19 to superintend repairs being made to the *Kingfisher*. During the winter I had the ballast removed and some new ceiling put in. By the beginning of May the repairs were completed, ballast replaced, accommodation finished and painted; ship was then scraped and painted outside. On May 11 the officers arrived and with the assistance of some of the rigger's crew they commenced getting ship ready for commission.

Men being very scarce and hard to obtain on May 19 I placed ship in commission with only ten men all told. On the 21st I had succeeded in getting six more men. We then put on board stores and other fittings necessary for the voyage and sailed on the 21st with orders to take up station Cape Sable to Sambro with head-quarters at Lunenburg.

On our way east we sighted some of the American seiners cruising off Little Hope. We kept on cruising east off Liverpool and Cape LaHave, with occasional visits as far as Prospect and Cape Sambro, my eastern limit of cruising ground. The seiners seemed to pass broad off and did not frequent the old cruising ground off Liverpool and Prospect as in former years, although there were large schools of mackerel passing well in shore.

Some good hauls were made by shoreboats off Lunenburg. Fish were very large and fat.

On June 1, we proceeded, by your order, east, calling at Halifax, and then on eastward to pick up the fleet.

On June 4, we spoke the American seiner *Seconnet* off Liscomb bound home loaded (400 bbls.) We also met two seiners off White Islands bound west. We called at Liscomb for my mail. Next day proceeded on east to White Head, where we met cruiser *Osprey*. We cruised off White Head till June 8, then proceeded east, rounding Cape Canso met seiner's off White Point bound west.

SESSIONAL PAPER No. 22

As far as I could ascertain the fleet did fairly well, getting their catch from 12 to 15 miles off Canso. Seeing no more of the fleet we worked into Chedabucto bay. Wind blowing heavy from north-west went to Arichat for the night.

On June 10, we proceeded to Port Hawkesbury to fit up steam launch No. 1. It took a few days to get launch ready. She was still in the building where I had her houses and cabin put on during the winter, when we arrived there. There was some delay getting an engineer, but finally secured John Quinn, by your directions, from Halifax. I placed Mr. Heighton, second officer, in charge of launch No. 1.

We had proceeded on the 17th to Port Hood to pick up three men you had instructed me to take from that vicinity. While there a telegram was received ordering patrol boat No. 1 to be placed at the disposal of Special Fishery Officer Torey, of Guysboro, for the purpose of testing the use of dog fish for lobster bait at Canso, N.S. I immediately ordered No. 1 to proceed as directed and was employed by Mr. Torey until July 10. We remained at Port Hood till 21st, then proceeded to Souris to take up station, off East Point, P.E.I.

The catch of lobsters has been good on north side of Prince Edward Island; best for years, fish very large. They were not so plentiful on south side but of larger size than usual. On June 29, I received your telegram ordering me to send two men, Charles McDonald, gunner and Edward McDonell, bos., to Montreal for the purpose of going to England to join the Canadian cruiser *Canada*, fitting out at Barrow.

On July 9, the American netter *F. W. Homans* came to Souris with 210 bbls. of mackerel caught at Magdalens and Bank Orphan. She proceeded to Port Mulgrave, Straits of Canso, landed and shipped them home by rail.

On July 10 I was advised by telegram that patrol boat No. 1 had finished her work at Canso. I ordered her to proceed to Souris immediately. She arrived there on the 12th. I then commenced cruising more or less in the patrol boat myself, visiting Murray Harbour south and Murray River to locate the position of lobster gear, as it was reported to me it was the intention to fish for lobster in that vicinity in the close season.

On the 15th received your telegram ordering to send crew to Dalhousie, N. B., and get launch boat No. 3, which had been doing patrol duty at that place, and have her taken to House Harbour, Magdalen Islands, to protect the lobster fishery there. Accordingly, I sent Mr. Heighton, 2nd officer, and one man to bring her to Souris. I engaged John Fitzgerald of Georgetown, P.E.I., to take charge of patrol boat No. 1, during Mr. Heighton's absence.

Patrol boat No. 3 arrived at Souris from Dalhousie on the 26th. I placed Fitzgerald in charge and despatched her to the Magdalen Islands immediately. She arrived there after some delay on the 29th. According to your instructions the boat was placed at the disposal of Fishery Officer Chevrier of House Harbour, doing some excellent work till the end of the season. She is now hauled up for the winter at House Harbour.

On Fitzgerald's return from the Magdalens he was appointed *pro tem* acting second officer of *Kingfisher*.

On July 28 we attended the Souris regatta. We were able, by your instructions, to render valuable assistance with *Kingfisher* and steam launch.

On the 30th we proceeded to Pictou to haul over on the marine slip. Owing to strong gales blowing from west did not succeed till August 2, when we hauled out, caulking and painting bottom and other repairs necessary. While there I took the steam launch up to New Glasgow and had her engine and condenser thoroughly overhauled by I. Matheson & Co. of that place.

The repairs to *Kingfisher* being completed the ship was launched on August 4 and sailed for Charlottetown on the 6th, launch No. 1 in company. On arrival at that place your telegram was received, ordering me to be at Pictou on the 10th to attend the grand regatta to be sailed at that place. We arrived there on the 9th and reported at once to the committee of arrangements. Next day being fine

4-5 EDWARD VII., A. 1905

and a good breeze the race came off. A large number of people visited the ship and enjoyed the shade of the spacious awnings spread for their benefit, remaining on board during the day. We were able with the aid of our steam launch to assist in making the regatta a success.

The mackerel fishery has been a failure at Prince Edward Island this year, nothing being done off Eastpoint, the great mackerel grounds. Cod fishing was also a failure in the Gulf, but lobsters have been very plentiful, better than recent years.

On August 25 there were two American and two Canadian netters at Souris but doing nothing. By the 25th all these vessels had left for Sydney in hopes to intercept the fall scholl of mackerel passing that way. I am informed that even this was a failure.

Then it was reported to some parties were canning lobster on the north side of Prince Edward Island, in vicinity of Cow River. I proceeded there with four men and found signs where work of that kind had been carried on but not recently.

Again information reached me that illegal lobster fishing was being carried on at Panmure Island, Murray Harbour and High Bank. I started cruising myself in steam launch No. 1, and found large numbers of traps set at the above named places, which we broke up.

I received information against parties on Panmure Island, also at Sturgeon, for fishing and canning lobsters in close season, for which I imposed the usual fine of \$20 each. We traced parties at the latter place three miles back from the shore and found where they had been canning lobsters contrary to law. I kept patrol boat No. 1 continually cruising in this vicinity. At one haul off High Bank we seized 150 brand new traps full of lobster in one afternoon. Lobsters seem very plentiful and of large size at this season of the year.

During the first part of September we directed our attention entirely to the protection of the lobster fishery. Fishermen seemed determined to put out gear only for us to seize nearly as soon as it was out. By that means it made it a very expensive business for them to carry on.

On September 26 we left the Gulf of St. Lawrence to take up station between Cape Sambro and Shelburne, with headquarters at Lunenburg. On account of the condition of the ship we were unable to remain east any longer. We had bad weather on our way west and had to be careful, as the sails were not strong. We called at Halifax and then proceeded on to Lunenburg.

Finding condition of the ship was not very satisfactory to keep up late cruising we proceeded on to Shelburne by October 15, and cruised off that port for the remainder of the month, when by your instructions I payed the ship out of commission on the 31st and laid her up unfit for any further work in the Fisheries Protection Service.

I left patrol boat No. 1, by your instructions, at the disposal of Inspector Mather-son, of Prince Edward Island, who will, when finished with the fall work, lay her up at Charlottetown and have her housed in.

I have the honour to be, sir,
Your obedient servant,

W. H. KENT,
Commanding 'Kingfisher.'

CRUISER 'CURLEW.'

ST. JOHN, N.B., December 10, 1904.

To Commander O. G. V. SPAIN, R. N.,
Commanding Canadian Marine Service,
Ottawa.

SIR,—I have the honour to still be in a position to submit to you my annual report on the work performed by this ship during the year now fast drawing to a close.

SESSIONAL PAPER No. 22

during which time we have been busily engaged in the performance of duties so various, and which so fully occupied our time that almost unnoticed we find another year has nearly passed away.

During the past winter the ship occupied her usual winter quarters near the Union Depot here, where a thorough overhauling was given the ship's machinery and hull, and all other matters attended to in order that the ship might perform her necessary work with the same promptness and efficiency as in the years gone by.

Your orders were received during February to procure two good seamen and with them proceed to Quebec in the beginning of March, and join a large class of officers and seamen of the service who were assembling there to take a course in gunnery instructions. These orders were carried out and a most interesting and valuable course of instruction was received by a very attentive class, who graduated in April with high honours, and departed to join their several ships. On the day the class took their departure from the Citadel it was with much regret I could not accompany them, but instead took my departure for Jeffrey Hales hospital, in Quebec, where a severe attack of blood poisoning kept me for eight weeks. I felt very much pleased in being able to walk even at the termination of this lengthy period, as for several weeks it appeared as if I would make my exit from that most excellent hospital in a manner far from pleasant to me. During this period the chief officer assumed command of the *Curlew*, and her usual work was carried out in a satisfactory manner.

Resuming command of ship on June 17, I carried out your orders to be present at the De Monts celebration at Annapolis, N.S., and we anchored off that historic old town in company with the cruiser *Constance*, and French, British and United States war ships, and assisted in making the celebration a success. We sailed from there on June 22, in company with those men-of-war, and we all steamed to St. John on the 23rd, and assisted in making the De Monts celebration there the success it proved to be.

At midnight of the 24th, we cruised down the Bay to the St. Croix River, and the Calais and the St. Stephen committee were given every assistance in making their De Monts celebration a very enjoyable function, and fittingly commemorate the landing of De Monts and his noble band of followers on the uninviting shores of Dochet's Island on June 26, 1904. In the midst of heavy downpours of rain the impressive ceremonies were carried out, and a banquet at Calais in the evening to the officers of visiting warships terminated for us a memorable week of De Monts celebrations.

We then went to the Island of Grand Manan where dense fogs and rough weather delayed us considerably in placing new keepers, with their household effects, on the much dreaded Gannett Rock and Machias Seal Islands. At the latter station there was such a heavy surf running that the keeper's wife and children could not be landed, without being in danger of drowning, and I was compelled to return with them to the mainland.

Giving our undivided attention to various and important fishery matters that kept us very busy till July 13, when we proceeded for a cruise on the southern coast of Nova Scotia, where our progress was impeded considerably by the dense fogs of July and August all along the coasts of the Maritime Provinces. Halifax was reached on the 21st inst., where the three gentlemen guests from Ottawa, who were enjoying a cruise on this ship very regretfully left us on account of urgent business at Ottawa.

After procuring some water and stores our ship's bow was headed towards the westward, and calls were made at Lunenburg, Liverpool, Lockport, and other places, and at Yarmouth we bunkered ship. On July 31 Grand Manan was reached, and on dropping our anchor we found the patrol launch strictly protecting the spawning grounds, with a view of preventing the large fleet of fishing vessels that were anchored in the various harbours around Grand Manan, from encroaching on the spawning ground limits at the Southern Head of that island. There were not any United States fishing vessels among the fleet, which fact was ascertained by boarding and carefully examining them all.

4-5 EDWARD VII., A. 1905

Settling various weir disputes and receiving evidence regarding the same, fully occupied our time till August 6, when another cruise was taken to Nova Scotia, and at Shelburne on August 9, 10 and 11, we enjoyed the distinction of acting as one of the judges in that town's annual sailing regatta, which took place in their beautiful harbour on the above dates. Fine weather favoured the large assemblage of sight seers along the harbour front, and with exciting races in the different events, together with the presence of the British warship *Indefatigable*, the regatta passed off in a manner most creditable to all concerned.

Our usual cruising was then resumed in the Bay of Fundy, and on reaching Yarmouth on the 12th, the ship was bunkered, and the following day we were enabled to anchor in Flagg's Cove, where we conferred with collector of customs regarding alleged dynamiting in Grand Manan waters.

On August 15, we ran into the anchorage in St. John Harbour, where the R.C.G.A., of Quebec, were holding their annual competitions on the 6 and 12 pounder quick firing guns at moving targets at a range of 2,500 yards. Much valuable information was gathered by our ships company with reference to the handling of the above named guns, and camp routine.

Cruising down the bay on the 31st, we endeavoured to arrest two fishermen on the Island of Campobello for alleged use of dynamite among schools of Pollock in Quoddy river, but they had escaped in a boat across the river to Eastport, Maine.

Cruising up the bay on August 27, an examination of the fisheries officers and their work was made at Quaco, Black River, Musquash, Dipper Harbour, and other places, and new instructions were given to those officers regarding their work in the future. On September 5, the steam launch was again placed at patrolling the spawning grounds at Grand Manan, and several tons of coal were landed at Seal Cove in bags for her to bunker from.

The Ledge, St. Croix River, was reached on September 6 in order to have better weather to paint ships houses, boats, &c., and I took the opportunity to visit the lakes on the international boundary line above Vanceboro, Maine, as extensive poaching by American citizens was reported as being in progress on those lakes. I found very little foundation for those rumours, and returned to the ship on the 10th, finding the chief officer had made good use of the time, and the ship all painted.

On the 13th and 14th, we procured bunker coals at St. Stephen, and steamed to Back Bay to arrest several Canadian fishermen there charged with illegal fishing, but they had all fled from the vicinity on the ship letting go her anchor there at sunset. Evidently the numerous \$100 fines imposed and valuable seines confiscated in that vicinity the previous year were still fresh in the memories of the evil disposed ones.

The necessity of sending the patrol boat to St. Margaret's Bay, N.S., arising, we took her in tow on September 19 and convoyed her as far as Yarmouth, thereby placing her in a position to proceed under her own steam to St. Margaret's Bay, where she would give every assistance to the fisheries officers in that section.

Bad weather prevented our arrival at St. Andrews till the 22nd, and there we found awaiting us the fisheries commissioners appointed by the Minister of Marine and Fisheries to look into the large herring, lobster, and other fisheries of the Bay of Fundy, which were alleged to be in urgent need of investigation, with a view to their future preservation. These gentlemen came on board on September 23 and the islands of Grand Manan and Campobello, together with a large number of fishing villages on the mainland were visited. Very interesting and well attended meetings were held in each place, eliciting information of much value to the commissioners. Eastport was also visited at the termination of those meetings and much attention was shown the commissioners by the owners of the numerous sardine canning plants, and every information was furnished them regarding the sardine industry.

The commissioners finally left the ship on Sept. 29 at St. Andrew, and we then proceeded to the Letang River endeavouring to prevent illegal fishing by seining there, but although no evidence sufficient to convict could be procured against any

SESSIONAL PAPER No. 22

of the numerous persons loitering in that vicinity, the illegal fishing gradually stopped, the evil disposed fishermen silently taking their departure to other more lucrative and less risky fisheries.

Much important work settling weir distances and other fisheries complications in St. John and other counties, busily occupied our attention till Oct. 17, when we steamed up the St. Croix river to St. Stephen, grounding the ship at the wharf there, cleaned the boilers and ship's hull, making everything ship shape, more particularly below the water line.

The fisheries inspector, L. S. Ford, at Liverpool, N.S., having completed work in his district with the patrol boat, we cruised over to Bryer Island on Oct. 25, and awaited for the temputuous weather to abate somewhat, an opportunity presented itself on the 28th inst., and, taking the launch in tow, brought her across to Campobello.

Numerous venturesome fishermen having begun setting lobster traps at several places on the north shore of the Bay of Fundy, the next few weeks was fully employed in destroying these traps, and seeking the cunningly devised receptacles in which they secreted their lobsters, such as bags and crates sunk in strange out of the way places. The ingenuity displayed by some illegal lobster fishermen, in fishing and hiding the result of their catch, is really marvellous, but it is our endeavour to annually keep pace with those fishermen possessing such a progressive and venturesome disposition, and the large number of cars, traps and bags annually destroyed will tend to show that we are not lagging far behind.

The annual collection of fishermen's bounty claims began with us at Flagg's Cove, Grand Manan on Nov. 16, and hard north-east gales and heavy sea rolling into the anchorage made our three days stay there anything but of an enjoyable nature. Shifting to the mainland on the 19th, the fishermen mustered at each of the other ports on our arrival, and presented the necessary information to enable us to fill out their many claims to the government's fishing bounty. Many hundred claims were gathered along the coast in the succeeding three weeks, and owing to the large majority of fishermen not keeping a proper account of their catch of fish, it requires both patience and resignation in securing the desired particulars.

Rumours having come to our ears that illegal fishing by seine and flambeaux was being secretly conducted in the Magaguadavic River by large numbers of foreign and domestic fishermen, we thereupon proceeded to stop it, and in this work the possession of a steam launch, like the one we are supplied with, furnishes us with a weapon that can be used secretly and effectively, and cannot be guarded against by the most cautious of illegal fishermen.

On Sunday night, November 27, we steamed to the Magaguadavic river in the launch, finding many men there fishing with seines and torches, we seized ten vessels having illegally caught herring on board, two of them being United States steamers, besides a number of seines and the fish on board of all the vessels. In the morning fines of \$100 were imposed on each sailing vessel, and \$200 each was the amount of fine levied on the steamers. Mostly all the above fines have been paid, and the others, no doubt, will be paid in a few days.

I regret very much to have to state that no mackerel schools came into the Bay of Fundy this season, much to the regret of anxious fishermen and myself, but good hauls were made by Gloucester seiners off the entrance to the Bay of Fundy. A report from Sydney, Cape Breton, on September 28, stated that seiners had returned to Boston from there with no fares. The fishing for mackerel around the coast of Cape Breton was poor, although the Captain of the seiner *Alavon*, when he arrived in Gloucester, reported that in all his experience he never saw more mackerel than he did this spring between Canso and Cape North.

While gathering information of other fisheries along the coast, I found at Lunenburg that the catch of their banking fleet has been quite poor, owing largely to the scarcity of bait, which is attributed mainly to the presence of dog fish, that great enemy of our bait fishes. It is to be hoped that some satisfactory method will be devised to

4-5 EDWARD VII. A. 1905

drive this scourge from our coasts, although this season showed a great diminution in the numbers of dog fish frequenting the waters of the Bay of Fundy, when compared with the season of 1903.

The curing of herring by the Scotch method reported as being successfully carried out this season at Canso, is being watched with interest along our coasts by the fishermen possessing advanced ideas in the herring curing, and they feel confident that the results will be of great financial benefit, not only to the fishermen but the community at large.

The sardine season along the boundary line between New Brunswick and the State of Maine has been quite successful, and very good prices have been paid our fishermen for their herring catches. Prices early in the season soared as high as \$25 per hogshead, but they gradually dwindled down to \$3 per hogshead.

A new industry was started during the summer season in the vicinity of St. Andrews by gathering cockles, which were sold to fishing vessels for bait, especially United States fishing vessels, and over three hundred barrels were gathered. These were readily sold at \$5 per barrel and the fishermen joyfully found that cockles were the only bait that dog fish would not eat, although many contend that a dog fish is so ravenous that he would eat anything.

During the firing by the R. C. G. A. this summer from Fort Dufferin here the catch of shad in the neighbourhood of the firing zone was exceedingly poor and the bay fishermen asserted that the gun firing from the fort frightened away the shad, and the poor catch seems to lend some truth to the foregoing statement.

A report covering the work of the steam launch will be forwarded you at once, and I sincerely trust both of those reports will be satisfactory and meet with your approval, as I have taken every care in their preparation.

I have the honour to be, sir,

Your obedient servant,

JOHN A. PRATT,

Commanding 'Curlew.'

QUEBEC, December 7, 1904.

To Commander O. G. V. SPAIN, R.N.,
Commanding Canadian Marine Service,
Ottawa.

SIR,—I have the honour to submit to you the following which is a synopsis of the work performed by the revenue cruiser *Constance*, under my command during the past year of navigation, 1904. On January 20 my engineers and crew began the work to refit ready for the opening of navigation.

On March 1 my boatswain and gunner arrived up from Gaspé, and along with Second Officer McGough proceeded up to the Citadel to go through a course of military drill. March 21 began the work of scraping the top sides of ship by men engaged and sent on board by Mr. J. U. Gregory, agent of the Department of Marine and Fisheries.

March 26, crew arrived from Gaspé, and general living commenced on board ship.

April 5, filled bunkers with coal, tanks with fresh water, and provisions received ready for sea. Three days after my engineer reported engine and boiler in good working order and ready to move when required. This I reported to Mr. Fred. L. Jones, Inspector of Customs, and following day received instructions to proceed to sea soon as weather and circumstances permitted.

April 11, left Quebec and proceeded down the river, passing ice in large quantities as far down as the Stone Pillars. Again met ice in large quantities off Point des

SESSIONAL PAPER No. 22

Monts,; put back to Godbout, where reports from the coast said that ice was everywhere to be seen. On receipt of this news we returned to Rimouski, where I received reports from Gaspé and the Northumberland straits to the effect that no passage could be made through on account of ice.

April 21, ice was still reported to be in large quantities when I received orders to return to Quebec.

April 27, more favourable reports were received from the gulf regarding the ice, reported same to Mr. Jones, who wired me to proceed at once to Barrington, N.S.

At break of day following morning we again left Quebec, proceeding down the Gaspé coast, and through the Northumberland straits without encountering any ice whatever, arriving at Barrington May 4. Here we took in tow the yacht *Puritan* purchased by the Department of Customs for the purpose of cruising about the Bay Chaleur, and left Barrington following morning, the 5th. On the 6th arrived at Halifax for a fresh supply of coal and water. On May 8 we left Halifax, and after a favourable run arrived at Paspebiac, on the morning of the 12th, when the *Puritan* was handed over to Preventive Officer Harvey for Customs Preventive Service about the Bay of Fundy and Gaspé. The *Constance* then proceeded on her cruise up the Gaspé coast, arriving at Rimouski May 19, where I received orders to continue on up the river to Quebec, arriving at latter named place 8 p.m. same date, for the purpose of having deck caulked, and at same time painted ship.

May 27, we again sailed from Quebec to resume our cruise down the gulf and towards Cheticamp, C.B., to intercept the schooner *Frank* reported to be in the smuggling trade between Cape Breton and St. Pierre Miquelon. On the evening of June 5 we succeeded in intercepting the said schooner and found thereon some 12 to 15 gallons only of assorted wines and spirituous liquors, all of which was duly written on the face of the clearance from St. Pierre, and later was duly entered in the Custom House at Cheticamp.

From the latter named date to July 7 our cruise extended along the Nova Scotia coast to St. Mary's bay, Bay of Fundy, Eastport, Ms., St. Andrews and the Magaguadavic river, Bras d'or lakes and Sydney, C.B.

July 8, we returned up the gulf, along the Gaspé coast and River St. Lawrence, arriving at Quebec July 13, and left the following day to resume our cruise down the gulf, taking in the north and south shores and arriving at Gaspé for a fresh supply of coal on July 19. Here we received information from Mr. Fred. L. Jones that the schooner *Frank* was again due at Cheticamp, C. B., from St. Pierre Miquelon, and supposed to have smuggled liquors on board. On receipt of this news we hastened away with all possible speed, arrived off the Cape Breton coast at 4 a.m. on the morning of the 21st, and at 9 a.m. was again successful in intercepting the said schooner *Frank*. We found on her about the same amount of liquors as she had on the previous occasion, namely, some 12 to 15 gallons of spirits and wine, all of which were duly reported on her clearance from St. Pierre, and later entered in report to the Collector of Customs at Cheticamp.

From latter named date, (July 21), to August 23, we resumed our cruise along the Nova Scotia coast to Bay of Fundy, returning up the Gulf on August 24, cruising through the Northumberland Straits, Bay Chaleur, Gaspé Coast, River St. Lawrence, and arriving at Quebec on the night of September 1. By orders received we left Quebec on September 4, cruising down the River St. Lawrence, the Gaspé Coast, Northumberland Straits, Nova Scotia Coast, arriving at Digby, N.S., on the 10th. From latter date to October 2, we continued our cruise as weather and circumstances permitted about St. Mary's Bay, Bay of Fundy, Grand Manan Island, Eastport and St. John, N.B. Part of this time assisting the Fisheries Commissioners to reach places that could not readily be made by land.

On October 3, by orders received, we again left the Bay of Fundy cruising grounds for the Gulf where we continued our cruise for the remainder of the season about the Magdalen Islands, Bay Chaleur, Gaspé Coast, Anticosti and the North Shore

4-5 EDWARD VII., A. 1905

during part of which time we had on board Dr. Lemieux who joined us at Rimouski, and handed him at Percé. On account of the North Shore and Anticosti mail schooner being disabled, and the captain seriously hurt during a N.W. gale between West Point of Anticosti and Cape Rosier the schooner was unable to make her last trip of the season, and by the kind permission of Inspector Jones, the *Constance* was permitted to carry the mail in her place. We left Gaspé on November 15, on same date landed the Anticosti mail at English Bay and the North Shore mail at Mingan and Esquimaux Point next day which was a great boon to the people and most thankfully received by the inhabitants of the above places and vicinity, after which we proceeded up the Gulf and arrived at Quebec on the night of November 20. On the 23rd the *Constance* was placed on Messrs. Davie & Sons patent slip for the winter for the purpose of refastening the iron shoe on keel and to scrape and repaint ship's bottom. On November 30 the *Constance* went out of commission for this year and all officers and crew paid off. Owing to fog and strong winds the *Constance* did not make as much mileage as former years, at same time covered some 13,162 miles.

We boarded all vessels of a suspicious nature, but smuggling about the Gulf and Atlantic coasts seems to be a thing of the past, or, if carried on at all, is done in such small quantities that it cannot be detected. In conclusion I may here mention the deplorable accident that happened to the *Constance* while proceeding out of the harbour of St. John, N.B., on August 9 last, when the American stern schooner *Butte Robinson* collided with the *Constance* carrying away our fore-mast and doing other minor damages to boat, boat davits and rigging. I say deplorable more so for the reason that out of my 40 years of seafaring life it was the first and only accident that ever befell my lot, and pray it will be the last.

I have the honour to be, sir,
Your obedient servant,

GEO. M. MAY,
Commanding Cruiser 'Constance'.

WINDSOR, ONT., December 6, 1904.

Commander O. G. V. SPAIN, R.N.,
Commanding Marine Service of Canada.

SIR,—I have the honour to present to you my annual report of the work performed by the *Petrel* during the past season.

The ship was fitted out, and placed in commission on the 16th of April and a departure made for Amherstburg, where sixteen tons of coal were taken on board and the regular patrol of Lake Erie established. On the 25th I placed a gas buoy in tow end of the dredged channel, near Detroit River Light, and took the gas buoy in tow for Grubb Reef. The weather for the next two days was unfit to place buoy so laid in Kingsville. On the 28th placed buoy on Grubb Reef. May 4 took Mr. B. Fraser out to inspect lighthouse on the breakwater Port Colborne. 5th departed up the lake with him on board. On the 7th at Kingsville, took Mr. Forster on board, and departed for Middle Ground Lighthouse, which was inspected by Mr. Fraser, when we left for Colchester Lighthouse, which was also inspected by the same. 10th I placed a spar buoy on Grecian Shoal and one on North Harbour Reef. The same day I seized 119 American gill nets set in our waters. Nets were got by grappling 11 miles easterly of Pelee Island. On the 14th about 28 miles easterly of Pelee Island, I seized 127 American gill nets well over in our waters. I sold both these lots of nets to fishermen of Port Stanley. 24th dressed the ship, and at noon fired a Royal Salute of twenty-one guns. 25th measured distance from Long Point Lighthouse

SESSIONAL PAPER No. 22

to end of the point, also took soundings off the point to answer as to advisability of placing a buoy there. Nothing of importance occurred during the month of June, no seizures having been made. July 1 by instructions from yourself, we assisted the people of Port Dover to celebrate the day. The ship was dressed and a salute fired. Three of the crew left to go to England as part of the crew of the *Canada*. On the 27th I seized 98 American gill nets set in our waters at a point about midway between Cut Light and Long Point Lights and $11\frac{1}{2}$ miles from our shore. August 4 I seized 83 American gill nets south of Cut Light several miles north of the boundary line. On the 11th I seized 90 American gill nets in our waters at a point south of Long Point and ten miles west of Long Light. On the 12th I seized 31 American gill nets near the seizure of the 11th, all several miles in our waters. On the 16th, having been instructed to ascertain, if I could, whether a fishing station near Fighting Island is in our waters or not, upon arrival there, I found I could not find a reliable starting point and so reported. On the 26th replaced gas buoy which had been broken from its moorings by some vessel. On the 27th, by instructions, I took Mr. Robinson, K.C., and party to Port Burwell. All were delighted with the trip. October 3 I seized 81 American gill nets off Long Point several miles north of the line. Again on the 4th I seized 35 American gill nets 3 knots S. E. half east from Long Point. On the 7th I seized 55 American gill nets south of a point 5 miles east of Cut Light, and 11 miles from our shore. Having received instructions to meet Mr. B. Fraser at Windsor on the 17th, I went there on Saturday the 15th. On the 18th departed down the river with Mr. Fraser and Mr. Forster on board. On the 19th they were landed on Colchester Lighthouse and also on Middleground Lighthouse. On the 20th Mr. Fraser left the ship at Port Stanley. Having received instructions to take Judge Horne and party to Pelee Island to hold Court of Revision, I went to Windsor on Saturday November 5, and on Monday the 7th departed down the river, calling at Amherstburg for John Auld, M.P.P., 4.40 P.M. arrived at West Dock, Pelee Island. On the 8th returned to Amherstburg and Windsor and landed the party. 9th celebrated King's birthday and at noon fired a Royal Salute of twenty-one guns. On the 12th having received instructions to proceed to Toronto with the ship, departed on the 13th and arrived here on the 15th at 10.05 A.M. and received orders to transfer the crew to the new cruiser *Vigilant*.

During the season, *seven hundred and nineteen* American nets were seized by me, the nets having been sold and the proceeds (with the exception of about one hundred and sixty dollars yet to collect), placed to the credit of the Receiver General.

Remarks.—Poaching by Americans was not by any means as persistent as last season. The lesson given them last year has had a good effect and although poaching was done they did not come so far over the line as formerly. The fishing was light all over the Lake Erie until near fall when good fishing was reported to me from many fishing stations.

The *Petrel* logged during the season 13,933 miles. And next season, with a much more speedy boat, I expect to reduce poaching to a minimum.

I have the honour to be, sir,

Your obedient servant,

E. DUNN,

Commanding D.B.S. 'Petrel.'

Commander O. V. G. SPAIN, R.N.,

Commander Marine Service of Canada,

Ottawa.

VANCOUVER, B.C., December 3, 1904.

SIR,—I beg to report on work done by D. G. S. *Kestrel* during the year 1904. During the first part of January the *Kestrel* was undergoing slight repairs and

4-5 EDWARD VII., A. 1905

receiving water tanks. On the 22nd she started out on regular patrol duty, cruising in Straits of Georgia, Straits of Juan de Fuca, and West Coast as far as Cape Beal; visiting all fishing stations en route. Returning to Victoria on the 29th and place of the D. G. S. *Quadra*, while the latter was receiving her annual overhauling. Arriving at Victoria on the 9th, we lay there until the night of the 13th, when we were called upon to render assistance to the stranded steamer *Tees* which had just run on the rocks at Trial Island; 35 minutes after we received word of the disaster we were alongside of the stranded ship ready to render any possible assistance; on arrival we learned that she had smallpox aboard. As the night was very dark, and the passengers and ship in no immediate danger, I at once proceeded to William Head for the doctor and quarantine steamer *Earl* arriving back to the stranded steamer at daybreak, when the passengers were transferred to the quarantine station. We then got a hawser attached to the stranded ship and with the help of the tug *Lorne*, tried to pull her off the rocks, but were unsuccessful; we remained by the ship until the following high tide, when by the combined efforts of three powerful tugs the ship was hauled off the rocks and taken into port.

On the 19th we again went on patrol duty, calling at Vancouver on the 21st, leaving again on the 25th for Hecate Straits, where we cruised during the month of March. On this cruise we located two new halibut banks, one in Works Channel and one in Chatham Sound. Returning to Vancouver we put ship on dry dock to receive a new propeller, the old one being used up by the action of copper and salt water.

On April 26 left Vancouver for patrol duty in Hecate straits, Queen, Charlotte Sound, and Chatham straits, calling at Massett, Virago Sound and Naden harbour, Queen Charlotte islands and intermediate stations, patrolling the northern waters thoroughly, gaining all information possible concerning poaching by foreign fishermen, also speaking and searching several fishermen frequenting our harbours.

Leaving Vancouver again on May 31, we cruised the west coast of Vancouver Island, visiting Barkley Sound, Clayquoit, Anousat, Noska, Quatsino, and other stations, gaining much useful information regarding the foreign halibut fleet, also locating two new halibut banks, one off Clayquoit, another off Quatsino. I also found that the south-eastern Alaska halibut fleet were fishing off this coast during the summer months, and considerable poaching going on at different places when opportunity offered. Leaving this coast we proceeded 400 miles further north to Hecate straits, where we cruised until the latter part of June.

Leaving Vancouver again on July 5 we cruised Queen Charlotte sound and west coast between Cape Scott and Cape Cooke visiting Quatsino sound inland as far as Yureka, returning visited Bull Harbour, Hardy Bay and other stations, destroying obstructions that Indians had placed in the rivers for the purpose of catching salmon and trout. Returning to Vancouver we took part in opening the new bridge at New Westminster, leading the procession through the same.

During August 1, we gave the ship a thorough overhauling and renovating, on the 15th we had the honour of being placed at the disposal of the hon. Minister of Marine and Fisheries and party. On the 16th Commander O. G. V. Spain, R.N., Commanding Canadian Marine Service paid us an official visit thoroughly inspecting both ship and crew.

On the 17th, we left Vancouver for Victoria with the hon. Minister Mr. Préfontaine, Colonel Gourdeau, Commander Spain and party. On the 19th, we left Victoria on regular patrol duty visiting Straits of Georgia, Howe Sound, west coast and all way stations.

Then proceeding north to Queen Charlotte sound, Millbank sound, Hecate straits and Chatham Sound, on September 22 word was sent us that there was trouble with the Indians on the Skeena, at Port Essington, and asking our assistance. I immediately left for the river and on arrival warned the Indians that if they intended making trouble I was there to protect the cannery men. I advised them to disperse, which they did.

SESSIONAL PAPER No. 22

After leaving the river I located three uncharted rocks in Chatham sound, made survey of same and forwarded information to Commander Spain.

We then returned to Hecate straits cruising until October 5. Visiting Skidegate and other places in Queen Charlotte islands, returning I located four dangerous, uncharted rocks, three in Hecate straits, and one off Island Point, Chatham sound, but owing to bad weather I was unable to survey same, or make proper observations.

While cruising off China Hat in Finlay son Channel we located a black cod bank of considerable extent; the Indians catching these fish in abundance: this bank is also unsurveyed. During this cruise I overhauled and searched several fishermen making the voyage from Alaska to Seattle through our inland waters.

On October 14, we left Vancouver with the returning officer taking the election proclamations to the different polling stations, arriving at Port Simpson on the 20th, returning to Vancouver on the 29th. On this cruise I searched several fishermen on the way to Alaska. Made the captains come on board and report, from them I learned much valuable information regarding the foreign fishing fleet operating in the near vicinity to our waters.

On November 7 we again returned to patrol duty in the northern waters visiting the fishing banks as far north as Port Simpson, but owing to bad weather little effective work could be done either in patrol or survey work; on return we came down the inside passages calling at all the principal fishing stations. Leaving again on the 26th, we cruised as far south as Race Rocks, visiting Victoria, Nanaimo, and other way stations, arriving at Vancouver on the 30th. Leaving again on December 5, we will cruise northern waters until the end of the year. Since January 1 to date we have steamed 10,700 miles, estimated mileage for the year, 11,600 miles.

During the year the foreign halibut fleet on this coast has increased from 12 to 27 schooners and from 3 to 8 steamers with two new steamers and one schooner building. The crews of the schooners average seven men each, the steamers 36 men each, making 477 men engaged.

Owing to the presence of the *Kestrel* in northern waters the schooners have practically abandoned Hecate straits; but during the summer months fish off the west coast where no doubt considerable poaching is carried on. Owing to the fast increasing fleet, and the distance of coast line that the *Kestrel* has to cover, it is impossible to give the efficient patrol necessary.

The patrol work in the northern waters is naturally slow and difficult, attended with more or less danger, as the waters are unsurveyed, consequently much of the work commenced in surveying new fish banks, uncharted rocks, &c., by the *Kestrel* remains unfinished.

I am, sir, your obedient servant,

H. NEWCOMBE,

Commanding D.G.F.C. 'Kestrel.'

To Commander O. G. V. SPAIN,
Commanding Marine Service of Canada,
Ottawa.

INSPECTOR'S OFFICE, VANCOUVER, B. C., November 30, 1904.

SIR,—I have the honour to submit the following report on the operations of the cruiser *Falcon*, for the past season of 1904.

As you are aware the department purchased this vessel last April, and we left for my district, viz.: No. 2 Northern British Columbia, during that month, I may

4-5 EDWARD VII., A. 1905

say, that we have extremely dangerous waters to navigate, sometimes being exposed to the whole of the Pacific ocean, also treacherous rapids and currents, but fortunately we succeeded in overcoming all these difficulties. We found the *Falcon* an extremely good boat in heavy weather and able to stand off quite a big sea, taking into consideration her size.

I may inform you that the vessel has done great work in placing a check on the illegal fishing that was in progress each season all along the northern coast.

During the season we have made 40 seizures, and in each case a fine has been imposed proportionately with the magnitude of the offence. One American steamer with scows and gear was seized for poaching in our waters, and the guilty parties fined and their property confiscated. We have also destroyed numerous barricades erected by the Indians for catching salmon, their *modus operandi* is as follows :

The canneries that capture their salmon with drag seines employ Indians to operate them and these Indians know of small rivers or creeks, in which they fish, generally they are a short distance apart. To enable them to catch more salmon, for which they are paid five cents each, by the canners, they obtain a piece of gill net and make it fast across the creek (some 100 yards up stream from the mouth), from one side to the other, being a deep net and the creek shallow, it drags on the bottom with an overlap, upon which they pile rocks and brush, making a barricade that no mature salmon can pass through; the fish finding the creek impassable, generally turn back, but some persist in descending the creek and get gilled in the net; those that return to the mouth of the creek swim round and round until they are eventually caught by the Indians in their drag seines.

In these cases fines were imposed and the barricades destroyed. We found a considerable amount of illegal fishing proceeding in the mouths of the Skeena, Naas and Rivers Inlet, where it is impossible for the officers in their small row boats to cope with these infringements of the Fisheries Regulations, especially in Chatham Sound, off the Skeena; during the week close season we found considerable illegal fishing proceeding, this we put a stop to altogether. On the Naas and Rivers Inlet was the same, though not so bad.

I may inform you that the fishing ground in my district covers an area of over 1,500 miles and it is impossible for the *Falcon* to do her work properly; however, she has I consider, done invaluable work this season among our northern fisheries.

You may form some idea of the extent of our work when I tell you that we have 30 canneries and fisheries in operation each season, scattered over this 1,500 miles, and these fisheries have approximately 3,000 fishermen working for them. These fishermen are paid on an average of seven cents a fish, and are consequently keen on getting every fish they can lay their hands on, and are willing to take chances on being seized if they are likely to get a big haul, more especially as in nearly every case the cannerymen pay these fishermen's fines.

To show you how our northern fisheries have been neglected in the past, we discovered a man fishing at the head of Knights Inlet, he was two and a half miles up a small river, that flows into the inlet, he had \$500 worth of salted salmon when we seized him, for his season's catch, that had nearly all been caught by Indians without licenses, two and a half miles from the salt water, in a salmon stream, and this has been his annual fishing ground for five years in succession or even more, he was of course fined for this serious offense.

The *Falcon* is now in snug winter quarters and will be placed in commission next March. Should you desire further details of the vessel's work or more detailed report, I shall be pleased to furnish you with same, which I can obtain from the Captain's 'log.'

I have the honour to be, sir,

Your obedient servant,

JOHN T. WILLIAMS,
Inspector of Fisheries.

SESSIONAL PAPER No. 22

CRUISER 'CANADA.'

HALIFAX, N.S., December 10, 1904.

To Commander O. G. V. SPAIN, R.N.,
Commanding Canadian Marine Service,
Ottawa.

SIR,—I have the honour to forward to you a synopsis of the duties and work performed by the cruiser *Canada* under my command during the year 1904.

On June 27, while I was in command of the cruiser *Osprey*. I received an official letter from you informing me that the Honourable the Minister of Marine and Fisheries had been pleased to appoint me to the command of the new ship *Canada*, then at Barrow-in-Furness, England, and also instructing me to be at Montreal on July 1.

Carrying out your instructions, before leaving the *Osprey*. I placed Mr. Graham, 1st officer, in temporary charge, giving him all necessary instructions as to the several duties he should carry out.

Arriving at Montreal in due time, a number of officers, petty officers and men, as named in your letter, met me there—and leaving Montreal for England on July 8 on board the Allan liner *Ionian*, arrived at Liverpool and Barrow on the 15th, and found the *Canada* well-nigh completed, requiring, by her appearance, only a few finishing touches. On July 26 we left Barrow, steaming towards the Clyde, arriving at Greenock same night, and on the 27th the *Canada* was run over a measured mile and developed a speed of seventeen and one-quarter knots, with apparent ease. The following day returned to Barrow.

After the builders had finished placing two machine guns on board, and handed the ship over, I signed crew and put ship in commission, and on August 16 proceeded to sea. Weather fine and moderate. Midnight, proceeding down Irish channel, cruising westward, having moderate to strong westerly winds during the passage. On the 25th, at 1.20 a.m., we arrived at St. John's, Newfoundland, and I wired you our arrival. We there refilled coal bunkers, replenished stores and water, and proceeded, cruising southward, arriving same day at Trepassey. After spending a few days there we cruised westward to Placentia. On September 13th I received cable saying—'Proceed to Gaspé.' September 14, proceeded to sea, and on the 16th, after facing a heavy norther, arrived at Gaspé—spending a few days at that place, with a run to Anticosti lightship and return to Gaspé. After filling coal bunkers, replenishing stores and water, we proceeded, by your instructions, towards Quebec, and arrived there on September 29, where we had the pleasure of meeting the Honourable the Minister and yourself. After remaining a few days, by your order, we proceeded to Montreal, where we were honoured by another visit from the Honourable the Minister, and also a visit from the Deputy Minister of Marine and Fisheries. Spending a few days at Montreal, we proceeded down the river, stopping at Quebec, where we took on board 500 Ross rifles. There I received your orders to proceed to Sydney via Strait of Canso. Sailing shortly, we arrived at Summerside, P.E.I., and Arichat. At Arichat I received your telegram—'Cancel Sydney, be at Halifax on the 20th.' We then proceeded westward, calling at the different ports and arrived, as per your instructions, at Halifax.

We have been detained here for some weeks making some changes and doing necessary work—decks caulked, lifting windlass and bed, to stop leaks in firemen's forecastle, also having a pilot house put on.

On November 24 Mr. Taylor came on board to install the wireless system of telegraphy, which work is now going on.

I have the honour to be, sir,

Your obedient servant,

C. T. KNOWLTON,
Commanding Cruiser 'Canada.'

4-5 EDWARD VII., A. 1905

ANNUAL REPORT OF PATROL BOAT NO. 2 FOR THE YEAR 1904.

PATROL BOAT Uo. 2, ST. ANDREWS, December 12, 1904.

Commander O. G. V. SPAIN, R.N.,
Commanding Canadian Marine Service,
Marine and Fisheries Dept.,
Ottawa.

SIR,—I have the honour to report to you on the work performed by this patrol boat this season, during which period she has been busily employed along the coast from St. John to St. Margaret's Bay, Halifax County. This useful boat is attached to the *Curlew* for various duties which can only be properly performed by a launch of her size.

She was hauled out of the water at St. Andrews during the winter of 1903, and was caulked and put into thorough order before being placed in the water in April last to resume her usual work.

Until the end of the lobster season she was kept busy in overhauling lobster cars and sharply looking after this fishing. On July 15, the date of the commencement of the close season on the herring spawning grounds of Grand Manan, we placed her at work protecting those fisheries. Considerable coal in bags was landed at a safe place in Seal Cove in order to furnish the launch with a constant supply. Constant patrolling night and day under the supervision of the local fishery officer was kept up until Sept. 18, when in response to your orders we towed her across the Bay of Fundy to Yarmouth. From there she proceeded under her own steam to St. Margaret's Bay, where she assisted the local fishery officers in enforcing the regulations against those trap fishermen who had adopted a very defiant attitude. Patrolling in St. Margaret's Bay till October 20, when orders were received for her to return to the Bay of Fundy again, and at Bryer Island the *Curlew* took her in tow over to Passamaquoddy waters again.

A number of fishermen along the coasts of Charlotte County then began lobster fishing with the trap buoys partly concealed by only 'watching' at low water, and sometimes without any buoys and other ingenious methods. From the date of her return from Nova Scotia to the end of the lobster close season the patrol boat was kept busily employed in ferreting out this illegal fishing, destroying many hundred traps and numerous sunken cars and bags, in which the results of their catch would be secreted till an opportunity presented itself to take the lobsters to Eastport.

It is generally acknowledged that through the work of this launch illegal lobster fishing is annually becoming less in my district. It was impossible to enforce the regulations from the *Curlew*, on account of the necessity always arising of making a cruise on the Nova Scotia coast during the fall months.

On the night of Sunday, November 27, about midnight, with this launch we managed to surprise a large number of illegal herring fishermen at their lawless work on the Magaguadavic river, which resulted in the capture of six Canadian and four American vessels, two of which were steamers, as well as boats, seines and herring. Fines of from \$100 to \$200 being imposed on each vessel on the following morning.

Some small repairs will be required to the boat's machinery this winter, and a little to the hull also.

Trusting that this report will prove thoroughly satisfactory to you,

I have the honour to be, sir,
Your obedient servant,

JOHN H. PRATT,
Commanding '*Curlew*.'

SESSIONAL PAPER No. 22

HALIFAX, December 1, 1904.

To Captain O. G. V. SPAIN, R.N.,
Commanding Canadian Marine Service.

SIR,—I beg to submit my report on the work performed by patrol boat No. 3 while under my command during the season of 1904.

May 17, acting under your orders. I took command of patrol boat No. 3 (*Davies*) at Halifax. The boiler and machinery were undergoing repairs, which were completed May 20. We then took on board coal and provisions, and on May 21 proceeded to cruise. We were delayed in Jeddore by storms and fog until May 24, when the weather cleared and we cruised to Liscombe, inspected lobster factory there and proceeded next day. On arrival at Canso the wind increased to a gale; moored boat to wharf and coaled up. May 26, proceeded, but were overtaken in the Gut of Canso by a gale of wind from the south-east and rain. Boarded five United States fishing vessels bound for Magdalen Islands and elsewhere to the northward, and remained at Port Hawkesbury till the storm abated.

May 30, left Pictou, arriving at Pugwash at 6 p.m., the wind having increased to a wole gale. June 1, the wind and sea moderating we proceeded to Pt. du Chêne, took on board coal and communicated with Inspector R. A. Chapman, of Moncton.

June 2, proceeded to Buctouche, leaving next morning, at noon meeting an easterly gale and fog went into Kouchibouguac harbour and inspected lobster factory and salmon fishing establishment. Then, weather moderating, we got under weigh, and cruised northwards; in the afternoon went into Neguac harbour for shelter from a southerly gale.

June 8, succeeded in getting away, but were forced to take shelter in north Tracadie, proceeded through Shippigan gully to Caraquet. Inspected lobster factories. The fishermen along the north shore report that stormy weather has interfered with their catch. June 13, proceeded cruising along shore examining salmon nets and boats, arrievd in Dalhousie harbour June 14.

Every Sunday during our stay in the Restigouche river Inspector R. A. Chapman or some of the fishery overseers came on board, and we cruised about the north and south shores of the Restigouche river and estuary, and as far to the eastward as the weather would permit. On week days, with or without the assistance of the different fishery officers, we patrolled the river and New Brunswick shore as far as Belledune.

I found that the fishery laws were well observed in this locality.

July 1, by your orders I left the patrol boat No. 3 in Inspector R. A. Chapman's charge and proceeded to join the D. G. S. *Canada*.

Distance run to date, July 1, 973 miles.

I have the honour to be, sir,

Your obedient servant,

W. J. MILNE,

Late Commanding Patrol Boat No. 3.

MONCTON, December 2, 1904.

To Captain O. G. V. SPAIN, R.N.,
Commanding Canadian Marine Service,
Ottawa.

SIR,—Referring to your favour of the 24th ult., *re* work of patrol boat No. 3 (*Davies*), while under my control during past summer, I would beg to say that she arrived at Dalhousie in charge of Capt. Milne on June 14; commenced patrolling the Restigouche river, with overseer Miller (the local officer) on board the next day, con-

4-5 EDWARD VII., A. 1905

tinued the work, giving special attention to the proper raising of nets during Sunday close time, above Dalhousie until July 1, when Capt. Milne having to leave with two of his men by instructions from the department, I placed Capt. Norton in charge, with two men to replace those who had gone away, they continued the patrol principally along the southern coast of the Baie des Chaleurs in Overseer Donald McLaren's district under his direction until July 20, when an officer sent by Capt. Kent of the *Kingfisher* took her away.

On June 26 I went over the nets between Campbellton and Dalhousie in the launch, Overseer Miller being with me; we found every net was raised and entirely out of fishing order. I may further state that the only infringement reported during the whole patrol was one net some 4 or 5 fathoms too long, and that on the inside ends where it did little harm.

I am, sir, your obedient servant,

R. A. CHAPMAN,
Inspector of Fisheries.

D. S. 'LA CANADIENNE, GASPE, December 31, 1904.

To Commander O. G. V. SPAIN,

Commanding Canadian Marine Service.

SIR,—In accordance with instructions, I have the honour to submit the following statement of the movements of *La Canadienne* during the season just closed.

Instructions were received to begin fitting out the ship on April 1, the vessel being then in the Louise Basin, Quebec, where she had wintered. As soon as the condition of the ice permitted, the ship was taken over to Levis, and placed on the gridiron at Davie's yard, and the new rudder which had been made by Mr. Davie was shipped. The crew having signed articles, the ship was put in commission, and left Quebec for the gulf on May 5. A number of buoys, chains, sinkers, &c., were taken on board for distribution at various points in the gulf. We called at Father Point for orders, and proceeded on down by the north shore to Godbout and Seven Islands, issuing the usual lobster packing and net licenses. On May 8, we called at West Point, Anticosti, and paid over the bounty cheques to the fishermen. We took on board here an assistant keeper for the South Point light and proceeded to south-west and South Point. At the latter point we landed the new assistant and disinterred the body of the keeper, who had died during the winter. From here we crossed to Percé hoping there to intercept the S.S. *Campana* and forward the body to Quebec, but the *Campana* was not on time. We continued along shore calling at the various lobster canneries, and met the *Campana* at Grand River on the night of the 11th. On the evening of the 12th we ran into Gaspé where we received instructions to wait for orders. In the mean time we coaled and painted the outside of hull. Received orders to meet the Captain of the S.S. *Gaspeian*, and consult with him as to the placing of certain new harbour lights between Cape des Rosiers and Ste. Anne des Monts, for the use of vessels coasting along that shore. We were also ordered to assist in removing a saw mill from Griffin Cove to Mal bay, we proceeded to remove the mill and returned to Gaspé on Sunday May 22, to meet Captain Bouchard of the *Gaspeian*, which we did, arranging with him as to the matter of the lights in question. After coaling we left Gaspé on the morning of the 24th, and cruised along the shore as far west as Ste. Annes, calling at the various coves where it was proposed to place new lights so as to be able to report fully on the matter. From Ste. Annes we crossed to Godbout on the north shore and continued on down the north shore to Esquimaux Point, calling at most of the fishing stations. At Esquimaux Point on Monday May 30 received an urgent message to come to the assistance of the S.S. *Admiral* which ship had met with an

SESSIONAL PAPER No. 22

accident at New Carlisle. We left at once, and crossed to the south shore through a gale of north-west wind with heavy sea, reaching New Carlisle at 9 p.m. on the 31st, when we found that the *Admiral* had returned to Dalhousie under her own steam. On June 2, we proceeded by order to take the place of the *Admiral* for one week carrying the mail and perishable freight between Gaspé and Dalhousie. We were engaged at this until June 9, when the *Admiral* was repaired and resumed her route. On June 11, we left Gaspé for the Magdalen Islands via the East Point of Anticosti, but ran into fog outside Gaspé Bay, and came to anchor under the land. The weather clearing on the 13th, we proceeded. Off the south coast of Anticosti, in 80 fathoms, we found the following vessels trawling : *Cavalier* and *Alice A. Lawson* of Gloucester ; *Roanoke*, *Athton* and *Baden Powell* of Lunenburg. The same day we called at Fox Bay and issued licenses for two lobster canneries, and the usual fish traps to Mr. Menier, of Anticosti. The first pack of lobsters for the season had been made on June 9. On June 14, we crossed to the Magdalen Islands, where we called at the main fishing stations. We left the islands on the evening of the 15th, and crossed to the Bay Chaleur, anchoring in Paspebiac on the morning of the 16th. From this port we returned to Gaspé, calling at the leading fishing stations along the coast. At Gaspé we coaled and fitted out for our usual Labrador trip. We left Gaspé on June 23, having on board the Inspector of Customs for Quebec, whose duty called him to Labrador and Anticosti. We proceeded by the East point and reached Natashquan on the morning of June 24. From Natashquan we cruised along shore to Blancs Sablons, calling at all the settlements and issuing the usual licenses, collecting the fees, &c. The fishing season was a poor one, due to constant strong westerly winds keeping the fish off shore. We boarded some 300 fishing and trading vessels, mostly from Newfoundland. At all the points where we called and on board many of the vessels, we had to attend to a number of sick people, and perform minor surgical operations. We left Blancs Sablons to return on July 11. By this date most of the vessels had abandoned the fishing to the westward, and were passing out of the Straits to seek the fish on the outer Labrador. On our return we kept to the westward as far as Seven Islands, calling at all the settlements. We left Seven Islands to return on July 17, calling on the 18th at West Point, Anticosti, where the Inspector of Customs had work to do. From Anticosti we crossed to New Carlisle, where we landed the Inspector on the 19th. From here we returned to Gaspé, where we anchored on the evening of July 20. After coaling and cleaning up, we took on board Mr. Fraser, assistant engineer of the department, and proceeded with him to inspect the new block, and lighthouse, on Sandy Beach Point, and the fog alarms at various points between Cape de Rosier and Father Point, where we landed Mr. Fraser on the 29th. We left at once and stood down along the north coast to Mingan, from which place we returned to the south shore, anchoring in Gaspé on Sunday, July 31. From Gaspé, after coaling, we proceeded up the Bay Chaleur as far as New Richmond, calling at all the fishing stations; from New Richmond we crossed to the Magdalen Islands, where on August 18 we put in commission the steam launch *Davies*, for the enforcement of the lobster close season in the waters about the islands, and more especially in the lagoons. We remained cruising and calling about the islands till August 10, when we crossed to the east point of Anticosti, where we had been instructed to report on the location of the new lightship. We called at the lightship the same evening, and found that the lighting apparatus was out of order, and that she was short of oil. We proceeded at once to Gaspé, and reported the matter, and were instructed to take over an electrician, who was to be sent down from Quebec, and a further supply of oil. From Gaspé we proceeded to sea and cruised along the immediate coast, returning there on the evening of the 17th to meet the electrician, who came down on the SS. *Campana*. Having him on board with the supplies for the lightship, we left at 5.20 a.m. on the 18th for the East Point. We had thick weather crossing, and made East Point by the bank, and felt our way along the bank to the ship, and anchored alongside at 7.45 p.m., putting the electrician on board at once. It came on to blow during

4-5 EDWARD VII., A. 1905

the night, and we had to move into Wreck Cove for shelter. The weather moderating, returned to the lightship at 3 a.m. on the 20th; found repairs were made, took electrician on board and left at once to return to Gaspé, where we anchored at 6.10 p.m. On August 22 we left for Magdalen Islands, taking over, by order, the Judge, who had to open court there on the 23rd. Saw the local officers at the Islands and returned by Miscou and the north shore of New Brunswick to the Bay Chaleur on the 25th. Called on Sir Wilfrid Laurier at Carleton, returning same evening to Paspébiac. Continued along the coast to Gaspé, where we anchored on the evening of the 27th. Coaled and returned to Bay Chaleur, where we cruised until September 2; took on board at New Carlisle Mr. Marcil, M.P., and left at once for Magdalen Islands to meet the lobster commission. Met these gentlemen at Grand Entry on the morning of September 5, and after an interview, left to return to the mainland; landed Mr. Marcil at New Carlisle on the 7th. From that day till the 9th were engaged between Bathurst and Percé, making inquiries among the fishermen as to the damage done by the dogfish, &c. Returned to Gaspé on the 11th and on the 13th left Gaspé for Pictou to go on the patent slip to paint bottom. Called at Charlottetown on the morning of the 14th, and the same evening at 5 p.m. anchored in Pictou. Owing to constant bad weather it was impossible to get on the ship until the 19th. Came off again on the 21st; found bottom in good order; rudder, screw, &c., all right. Left immediately for Gaspé; had it rough all the way; reached there on the 23rd, and found the D.S. *Canada* in port. We coaled and blew off our boiler, which had been steadily under steam since early in April. On September 29, left Gaspé for the fall trip to Labrador, having on board, by order, Père Blanche, head of the Eudiste Fathers, who was proceeding to inspect the mission stations along that coast. Proceeding by the west of Anticosti, we made the north shore at Mingan, and stood down along the Labrador, calling at each settlement, and reaching Blancs Sablons on October 6. Found all well along the Labrador, and though the fishery had been a poor one, yet there was no distress on the coast. Left to return the same day, calling along the coast, and at the west point of Anticosti to take the bounty claims, and reaching Gaspé, where Père Blanche left us on October 12, at 9.30 p.m. We had unusually heavy weather during the whole of this trip. At Gaspé we coaled and left for the Magdalen Islands, where we spent the 17th and 18th of October. All fishing operations were over. We met there the D.S. *Brant*, which had been sent over to make some repairs to the engine of the *Davies*. The schooner *Bessie Willis* was ashore at Cap aux Meules, but too far up to be hauled off. Returned to Gaspé on the 19th, where we got orders to meet the Hon. R. Lemieux at Dalhousie on the 22nd; did so, and returned to Percé, where we anchored on the morning of the 24th. Left same evening to return; landed Hon. Mr. Lemieux at Campbellton on the 25th, and returned at once to Paspébiac, where we anchored at 10.40 p.m.; next day, 26th, proceeded to Gaspé, where we coaled on the 27th, and on the 28th left for Magdalen islands, calling at Percé, by order, to take on board the returning officer, who was proceeding to the Islands with the ballot boxes. Landed this officer at Ancherst on the 29th, and returned to Gaspé on the 30th, Sunday at 8.10 a.m.; had heavy weather going to and returning from the Islands. At Gaspé received orders to proceed to Quebec, taking deputy returning officer along the coast from Cape de Rosier to St. Anns, and calling at the lightship to take up the mechanics who had been working there during the season. Left Gaspé at 10.15 a.m. on October 31; called at Cape de Rosier and took on 25 men. Fox River at 4.20 p.m. for returning officer; blowing a gale of northwest; could not touch at Fame Point; called next day at various points and on November 2 landed 12 men at Les Eboulements. Reached Quebec at 2.25 a.m. on November 3, and made fast to the King's Wharf. The ship now went out of commission in the fisheries service, hauled down her pennant and was handed over to the agent of Marine and Fisheries at Quebec. Under this gentleman she was employed in various ways, taking up and putting down buoys and sounding for a shoal reported off Murray Bay, which she found, until November 25, when she was laid up in winter quarters in the Louise Basin, and the deck hands paid off, the engineer's crew remaining on board to dismantle the engines, &c.

SESSIONAL PAPER No. 22

The season was passed without hitch or accident of any kind, which shows how carefully the ship was handled by her sailing master, Captain Chalifour, and the officers under him. The season was an usually rough one, and we had a good deal of fog; in spite of our trying to avoid gales of wind, we were caught on several occasions. All branches of the fishery were below the average. This was due entirely to the severe weather condition. The dog-fish were not as numerous as they were in 1902 and 1903, in fact, in several fishing divisions fishermen were not bothered by them at all; it would therefore appear as though they were backing off again.

The above being humbly submitted.

I have the honour to be, sir,
Your obedient servant,

WM. WAKEHAM,
Fishery officer in command of La Canadienne
And Inspector of Fisheries for Gulf of St. Lawrence.

ANNEX B.

DETAILED REPORT OF FISHERIES INTELLIGENCE BUREAU.

HALIFAX, N. S., December 31, 1904.

Commander O. G. V. SPAIN, R.N.,
Commanding Canadian Marine Service,
Ottawa.

SIR,—The following report on the condition of and transactions connected with the operations of the Fisheries Intelligence Bureau, during the season of 1903, is herewith submitted:

Forty-six reporting stations comprised the Bureau during the past year. One new reporting station was established at Main-à-Dieu, C.B., in charge of Mr. George W. Dickson, and new reporters were appointed as follows :—Ingonish, C.B., Mr. Sidney S. Burke ; Port La Tour, N.S., Mr. George A. Crowell ; Queensport, N.S., Mr. William Knowlan, and at Ste. Adelaide de Pabos, Que., Mrs. A. LeMarquand.

An application was received from a resident of East Point, Scatterie Island, C.B., requesting that a reporting station be established in that locality, but owing to various reasons was not authorized by you.

A summary is given below of the particular transactions at each of the individual stations which have been in operation during the past year, showing the amount of work performed at each, and the present condition of these establishments together with other remarks of a general character connected with these stations.

LIST of Fisheries Bureau Reporters who are Government Officials.

Name and Residence.	Name and Residence.
C. P. LeLacheur, Arichat, C.B.	H. C. V. LeVatte, Louisburg, C.B.
Chas. F. AuCoin, Cheticamp, C.B.	Lewis McKeen, Mabou, C.B.
J. M. Viets, Digby, N.S.	M. A. Dunn, Margaree, C.B.
Chas Owen, Georgetown, P.E.I.	George Rowlings, Musquodoboit, N.S.
Charles Dixon, Grand Manan, N.B.	P. T. Fougere, Petit-de-Grat, C.B.
J. C. Bourinot, Hawkesbury, C.B.	E. D. Tremaine, Port Hood, C.B.
J. H. Dunlop, Liverpool, N.S.	J. A. D'Entremont, Lo. East Pubnico, N.S.
J. R. Ruggles, Lockeport, N.S.	

Allowance \$15 each per season.

List of Fisheries Bureau Reporters outside the Civil Service.

Name and Residence.	Name and Residence.
David Montgomery, Alberton, P.E.I.	Miss. Ada Beck, Paspebiac.
J. T. Jean, Arichat, C.B.	E. G. Tuzo, Percé, Que.
Edmund D. Kelly, Bloomfield, P.E.I.	Mrs. M. J. Bond, Pt. St. Peter, Que.
John E. Cohoon, Canso, N.S.	John Walls, Pt Escuminac, N.B.
Mrs. E. Blanchard, Caraquet, N.B.	R. G. Proctor, Port Malcolm, C.B.
J. Lewis Nickerson, Clark's Harbour, N.S.	David Murray, Port Mulgrave, N.S.
John P. Gruchy, D'Escousse, C.B.	Arthur Balcom, Salmon River, N.S.
James, Nichol, Gabarus, C.B.	John A. R. Morrison, Sand Point, N.S.
Charles Viets, Gaspé (Douglastown).	Thomas D. Morrison, St. Ann's (English-
Mrs. A. E. Brotherton, Gascon's L'Anse, Que.	town).
Mrs. J. Carbery, Grand River, Que.	Mrs. A. LeMarquand, St. Adelaide de Pabos, Que.
S. S. Burke, Ingonish.	Angus J. McCuish, St. Peter's, C.B.
Simon M. Giffin, Isaac's Harbour, N.S.	P. E. Vignault, Seven Islands, Que.
J. M. McIsaac, L'Ardoise, C.B.	Mrs. M. J. Robichaud, Shippegan, N.B.
A. Maloney, Long Pt. (Mingan), Que.	Miss. Z. Lemieux, So. West Pt. Anticosti, Que.
W. A. Zwickler, Lunenburg, N.S.	John A. Leslie, Spry Bay (Leslie Bay), N.S.
J. A. LeBourdais, Magdalen Islands, Que.	William Knowlan, Queensport, N.S.
G. W. Dickson, Main-à-Dieu, C.B.	John E. Dillon, Whitehead, N.S.
Hume Hopgood, Malpeque, P.E.I.	F. L. Hatfield, Yarmouth.
Mrs. M. Muenier, Newport Point.	G. A. Crowell, Port La Tour, N.S.
A. B. Macdonald, Meat Cove, C.B.	

Allowance \$15 each per season.

CANSO, N.S.

Report of A. N. Whitman & Son:—

The year 1904 can be put down as an off-year for the fisheries of Nova Scotia. There has been a scarcity of both fish and bait along the whole coast during the whole season with some unimportant exceptions, and this scarcity, together with the prevalence of dogfish for a considerable portion of the season, has made the business unprofitable to all concerned.

Codfish.—For the above named reasons the catch has been small. Canso is the principal rendezvous for the fishing fleet—the principal source of the bait supply. Many of the banking fleet laid here from six to eight weeks, in the height of the fishing season, on their second trip, without securing a baiting, and went home to end a broken voyage. The high prices prevailing have compensated in part for the short supply, but not fully. The need for an adequate supply of frozen squid was never more apparent.

Haddock.—The January catch of haddock in Chedabucto and St. Peter's bays, upon which many rely as the harvest of the year, was not large, chiefly due to extremely rough weather. There was a good school of haddock on, and on New Year's day, at Canso alone, some five thousand dollars were paid out for haddock, representing a catch in the vicinity of 350,000 pounds, but that was the best day's catch during the haddock season. The curing of finnan haddies has become an important industry in Canso, many thousands of boxes of these toothsome delicacies being shipped each year, and the trade is growing rapidly. It is predicted that this port will soon become the main source of supply. The spring haddock fishery was not important.

Pollock.—The catch of pollock has been rather over the average, and would have been larger had a regular supply of bait been obtainable. The unusually high prices paid have much stimulated the efforts of those employed in this business.

SESSIONAL PAPER No. 22

Hake.—This is not a hake country, and the supply has been unimportant.

Halibut.—The catch of halibut has been the smallest ever known.

Mackerel.—The spring mackerel fishery in Chedabucto bay was one of the smallest on record, and in marked contrast with the previous year. The fall fishery bids fair to be about as unimportant. The fish have been of very large size, and phenomenal prices have been paid.

Herring.—The herring catch throughout the season has been small, as a rule, though in some localities for a few days good catches have been made. The steamer *Thirty Three*, employed by the Dominion government to develop drift net fishing after the fashion followed on the coast of Great Britain, met with poor success. It is generally believed that her nets were too small in the mesh to catch the herring and mackerel which frequent our coast, both of these species of fish being much larger with us than on the other side. The shore crew, consisting of a cooper and six Scotch lassies, put up the catch after the most approved fashion, but did not have enough to do to keep them steadily employed. The catch was marketed principally in St. Petersburg and New York, and brought outside prices, those in New York selling for from \$5.50 to \$6.50 per half barrel. It is not quite demonstrated that the Scotch method of curing will save our largest herrings in warm weather, but for medium sized herrings its suitability cannot be questioned. There may be two opinions as to whether it improves the flavour or quality of the fish, but it is clear that there are millions of people who are accustomed to eating herrings put up in that fashion and will have no other. The principal difference between the Scotch method and ours lies in the Scotch 'gibbing' the herring, while we 'split' them. We think that the wisdom of the government in making the experiment and continuing it for a period of years cannot be questioned. We predict that 'steam drifting' has come to stay, and that the Scotch cure has probably done likewise. Let us give the people their fish in the form they want them, whether it suits our tastes or not. It is believed by many that with mackerel and herring nets of suitable size, a boat like the *Thirty-three* could easily pay for herself in a twelve month. She is a sturdy little boat, and admirably adapted to the business.

Lobsters.—The catch of lobsters is diminishing in the vicinity of Canso. It is hoped that the hatchery being erected here by the Dominion government will bring about an improvement in the supply. It seems to be pretty well demonstrated that the hatching out and distribution of lobster ova has done much for the localities where such distribution has taken place.

Squid.—The catch of squid this year has been but a meagre one, and has caused much disappointment and loss. The need of more and better cold storage was never more manifest and it is to be hoped that the cold storage building nearing completion at Canso with a capacity of about twelve thousand barrels will help considerably in supplying the demand for bait, when once in successful operation.

Dogfish.—The dogfish 'pest,' which it is hoped will soon cease to be a pest and become a blessing, has been in evidence as usual. The government reduction works, for the utilization of dogfish and fish offal, converting them into fertilizers and oil, are now being erected at Canso, and unless all signs fail, bid fair to be the beginning of an industry that will be worth millions to the fishermen of the Atlantic coast. We feel confident that it is a step in the right direction.

Reporter, Mr. John E. Cohoon :

Codfishing inshore this season began on April 6, with fair results which continued throughout the month. Bankers arriving on April 14 from the western bank reported

4-5 EDWARD VII., A. 1905

codfish there in fair quantities. A like condition prevailed inshore on May 7, but owing to unfavourable weather, the boatmen found it impossible to get a full day's fishing the past week, and as a consequence the average quantity taken was about 200 lbs. per man. Codfish were fairly plentiful about the middle of May, but the weather was still against successful fishing, and the highest catch for the week was 2,200 pounds. Good quantities of cod were on the coast on May 28, but boats had to go to Port Hood to procure herring bait, losing two or three days' fishing. One fisherman's catch for the week was 1,500 lbs. On June 4, it was reported that the codfishery was very dull, due to the large quantities of mackerel offal thrown overboard by the United States mackerel fleet. It was further reported that cod, haddock and pollock, were simply gorged by this offal, and would not take the bait used by the fishermen, hence the average for the week was very small. Three men landed during the week of June 11, 2,200 lbs., and about 500 lbs. per man was the average on the 18th, with boats averaging two quintals by the report of June 25. During the last few days in June the boats had only two days' fishing; cod, haddock and pullock were in fair quantities, but bait was unobtainable and the loss to the fishermen at the lowest estimate was one thousand dollars per day. Fair quantities of cod were again reported in the inshore grounds July 1, but the catches to the end of the month varied from $1\frac{1}{2}$ to 2 quintals per man. The August catch was small. To September 3, 1,500 lbs. per boat were landed. All branches of the fisheries were reported a complete failure on September 1, due to high winds and a scarcity of bait and only a few hundred pounds of cod were landed the latter part of the month. 3,000 lbs. was the largest catch in one day's fishing reported October 1, and when the weather permitted to the close of the season several fair catches were taken. The inshore fishery was reported below the average this season.

Haddock were first reported about the middle of May, and on the 19th one trap at Whitepoint landed 12,000 lbs., and on the 21st, fair catches were taken. Good fishing at Whitepoint was reported on May 28, where 20,000 lbs. was the result of one trap during the week. An occasional fair catch of haddock was taken in June, chiefly from traps and nets and the report of July 2, stated that 15,000 lbs. were taken on June 27. Haddock were on the inshore grounds early in July, but bait was scarce and the catches were small, which remained the same to the close of the season. The haddock fishery for the past winter was a successful one, but the catch for the summer months was below that of the previous summer. Since November 21 haddock have been taken in good quantities, and it looks as though the winter catch will be as large as that of the past winter.

Halibut.—A considerable quantity of halibut was landed at this station by bankers during the months of April, May and June. Local fishermen landed a fair quantity in June and July.

Herring were first reported when striking in off White point on June 7, and on the 9th twenty barrels of herring were trapped at the same locality. The Scotch drifter, No. 13, operating at this station, landed about 25 barrels for the week. During the week of June 20 the White point Trap reported a few barrels of herring daily, with the largest catch towards the end of the week at 45 barrels. A few fair quantities of herring by fishermen's nets were taken in July on the 20th, 28th and 30th. Herring were scarce later in the season, and the few fishermen who had nets out reported dogfish plenty. The herring catch on this coast the past season, as compared to other seasons, is said to have been a complete failure.

Lobsters.—The fishermen engaged in this industry were reported on May 7 doing very well, with several boats landing 2,000 pounds during the week. The prevailing price then of \$4 per cwt. made good week's work for two men. Owing to east winds and heavy seas the lobster fishermen could not touch any of their outside traps,

SESSIONAL PAPER No. 22

and the highest boat landed about 1,000 pounds. On May 21 north-east to south winds, with thick fogs and heavy rains, rendered the lobster fishery dull, and boats were unable to reach their gear set on the outside grounds. Two hundred pounds per boat were landed on May 28 and 250 pounds on June 4. The average catch for the week of June 11 was 300 pounds, with 500 pounds being the largest catch reported for one day of the week. Fairly good fishing was reported to the middle of June, but the majority of the fishermen were making preparations for the codfishery. Small quantities of lobsters were taken the latter part of June, but all lobster gear were being brought ashore about the 25th. The lobster catch on this coast was below that of the past season, due largely to rough weather. High prices ruled the past season, and the fishermen realized for their catch about the same amount of cash as in previous seasons.

Mackerel were first taken this season, when one trap reported 650 mackerel on May 25. Two days later, on the 27th, 1,700 mackerel were taken by one trap, and a large fleet of American vessels was off shore watching the movements of the fish. At White point, on the 28th, 3,000 fish was the catch of one trap. Large quantities of mackerel were taken early in June by the few fishermen who were following this pursuit, and on the 4th, at White point, one trap reported a haul of 9,000 mackerel. This trap has netted the owners about \$2,000 the past three weeks. A few small catches were reported to June 15, when there was a scarcity of mackerel to August 13, on which date fair catches by fishermen's nets were reported. Mackerel struck in large quantities on August 24, and the fishermen were reported averaging about \$3 per day. Several small stops were made later in the season, the total catch of which is considered about the same as last year's.

Pollock have been and were up to the month of November very plentiful on this coast. Local fishermen have landed a very large quantity, and the prices paid were much higher than in previous seasons, making the pollock catch this season the largest ever landed at this station.

Squid were first reported on July 18 in small quantities along the shores, and several small lots were taken up to August 27, when about 100 barrels were reported by the traps. Good catches of squid were again taken in traps on the 29th and by the report of September 10, the fishermen were forced to land their traps and nets on account of the large numbers of dogfish which struck, in-shore. Squid were plentiful on October 8, but would not 'jig' due to the swarms of dogfish which had possession of the fishing grounds. A few, however, were 'jigged' the following week. Squid were very scarce during the summer months, but the usual quantity was taken in the fall and stored for the winter's fishing.

Dogfish were very plentiful during the past season and caused considerable trouble and damage to the fishing industry and gear at this station. A fertilizing plant for the purpose of manufacturing this fish into fertilizer is badly wanted at this station. and the general opinion is that a plant of this kind if established would pay handsomely.

CLARK'S HARBOUR, N.S.

Reporter, Mr. J. L. Nickerson :

Codfish.—The shore fleet of large undecked boats began cod-fishing here in full force about June 1, that is, directly after the closing of the lobster season. The difficulty which met them at the outset was the scarcity of bait, so noticeable during the past year. The fish were unmistakably on

4-5 EDWARD VII., A. 1905

the grounds in very promising numbers, but operations were greatly retarded and in some instances completely suspended for days owing to the inability of the boats to procure the right kind of bait—fresh mackerel or herring. The only substitute were clams, which took much time to collect, and answered the purpose but poorly after all. Consequently the general catch for the season came a little short of the average, helped out to some extent by more buoyant markets abroad, and a brisk home demand for the supply of stock to the factories of boneless fish, of which we have three at this place now.

Haddock.—The fishing for haddock either by line or trawl is not a distinct branch here, but is carried on simultaneously with the foregoing, the grounds being the same and the fares more or less mixed. Haddock appeared early in the spring and continued without much variation through the season. The decline in the all round catch, which was considerable, is to be attributed of course to the same cause affecting adversely the cod-fishery, want of suitable bait. *Pollock*, which were reported plentiful towards the close of the season, are also set down for a marked shortage owing to the same circumstance.

Halibut.—Trawling for halibut here sank to its lowest record last year. In this pursuit clam bait resorted to in other kinds of line fishing is of no use whatever. As a result, very few halibut were landed, and most of them were 'jigged' while playing around the make-shift bait, which they would not take. The Cape Sable Packing Company canned only 70 cases, as against 800 cases last year.

Herring.—The entire absence of herring, big or small, at this station was a most unwelcome feature in the past year's fishing. Neither the spring, the summer nor the fall school, as the periodic visits are locally termed, entered any of the harbours or large open bays where nets are commonly placed. Not ten barrels of herring were taken in the large trap and nets for the whole season, though the weather and other conditions were considered favourable throughout. When the fall school struck in at Mud island, a short distance to the west, numerous boats from this place went there and secured good fares with their own nets; otherwise the outlook would have been serious for the winter supply of lobster bait, always supplemented by local catches, the bulk of it for use here, some 20,000 barrels being imported from New Brunswick. It is remarkable that while no herring to speak of approached the western shore within the reach of ordinary gear, the waters ten miles from land were literally swarming with them in schools extending from Lockeport to Cape Sable. From this source the Pubnico vessel fleet obtained their bait by netting on the ground, though not equipped in the best manner for that purpose. These schools are of regular occurrence each year, and practical fishermen have never known them to fail. Here, then, lies an immense field ready for reaping, which would undoubtedly repay three-fold the time and expense of working it if we only knew how. Mr. Cowie's experiment in drifting, with headquarters at Canso, N.S., has been watched with keen interest in these parts. The venture it appears was not wholly successful because the fish were not there. If it is to be repeated next year under government aid and direction, it would certainly be advisable to extend the operations westward, with temporary curing stations at points of ready access along the coast. In view of the yearly prevalence of herring in vast numbers as described above, a competent drifter could not fail in such a voyage.

Lobsters.—This is the staple fishing industry among us. The severe winter interfered somewhat with the usual steady work, but no scarcity was reported when the chances were fair. The number of boats engaged were about the same as formerly. The following is the statement of the output of the local canneries :—

SESSIONAL PAPER No. 22

James McGray.....	956 Cases
A. S. Swim.....	837 “
M. G. Nickerson & Co.....	1,200 “
F. T. Nickerson.....	1,000 “
Cape Sable Packing Co.....	1,720 “
	<hr/> 5,713

This is an advance of about 1,000 cases over the output of the same factories last year. The live export more than held its own in quantity, and prices were uniformly good. On the whole, this branch yielded highly satisfactory returns, and what is also encouraging there is no report of a diminution in the catch.

Mackerel.—Again the word ‘failure’ must be written against this division of our fisheries, which once paid local enterprise extremely well. After two years’ intermission a trap was set here last spring, anticipating an inshore run, but no fish appeared in these waters and the nets covering a wide area did absolutely nothing. It is now admitted that mackerel passing north, take an entirely different route from that followed in former years.

Mr. Nickerson in forwarding his report to the Bureau states, ‘although the fisheries at this station, are not quite as satisfactory as last year’s owing to the scarcity of bait, the business done on the whole and the extra prices realized for fish have made the result a fair average in comparison with previous seasons.’

LOCKEPORT, N.S.

Reporter, Mr. J. R. Ruggles.

Alewives, when first reported May 2, were scarce, with fair catches the following day. Twenty-five barrels of alewives were taken this season.

Cod scarce, was reported May 28, and the off-shore fishery operations had not begun as yet. A few cod were on the coast May 9; but the weather was very much against cod-fishing for the next five days. Cod struck off the bay on the 23rd, and the highest boat reported 12 quintals. 36 tubs of cod were taken in June on the 3rd and from the 9th to 20th, the fishing varied from good to poor, with the best boats reporting 26 and 43 tubs on the 18th and 20th respectively. Light but regular catches were taken from now to the end of June; 650 quintals of cod were landed on May 28 by the banker T. C. Lockwood. The inshore catches were reported light to October 15. The best boat operating off-shore in July reported 35 quintals on the 11th, and on September 6 the *Ido M. Clarke* arrived in with 700 quintals of cod. 750 and 400 quintals were the respective catches of the T. C. Lockwood and J. H. Archer on September 8. 1,725,591 pounds of cod was the total catch this season, and 144 gallons of cod oil were extracted which is 86,118 pounds and 180 gallons below last year’s yield.

Haddock were not reported this season, but about 8,746 pounds were taken during the season. This branch, too, shows a slight decrease.

Hake and *Cusk* were also not reported, but 13,119 pounds were taken this season.

Halibut, as far as reported, were fairly plentiful in June on the 20th, with light fares being taken on September 1, 2 and 3. The total catch is estimated at 10,000 pounds, or about the same as the previous season’s, which was considered a very successful one.

Herring.—The first report of herring was received on June 3, when this fish had struck in on the grounds. Throughout the remainder of the month, and during July and the first two weeks of August herring were very scarce, and their absence was keenly felt, as no bait could be obtained. Good stop of herring were made on August 20 and 22, and during the balance of the month light catches were reported. About one-half of last year's catch, or 500 barrels, were reported taken.

Mackerel.—The only report of mackerel received was on August 27, when a few were reported striking in . The total catch was small, there being only fifteen barrels taken.

Lobsters.—Were taken in small quantities on May 2, but on the 3rd, increased to fair, and good lobster fishing was reported for the next four days. From the 9th until the 21st fair catches were reported each day excepting the stormy days of the 11th, 12th, 13th, 14th and 16th. For the balance of the season lobsters were scarce.

No. of live lobsters (averaging 2 lbs.) taken for export, 127,000.

No. of lobsters canned, 1,500 cases, or 72,000 pounds.

Thirteen thousand less of live lobsters were exported this season than last; but the output of the factories was increased by 11,900 pounds.

Pollock fishing this season is represented by 1,749 pounds.

Clams.—One hundred and sixty-two barrels of clams were taken this season.

DETAILED STATEMENT.

Name of Vessel.	No. of lbs. taken.	Oil bbls.
' Ida M. Clarke '	178,500	
' T. C. Lockwood '	238,000	
' Julian H. Archer '	198,000	4
Off-shore crafts	384,705	
Total of vessels	999,205	4
Boats from Port Herbert to Blue Island	750,000	
	1,749,205 or galls 144	

	Lbs.
Proportion of cod	1,725,591
“ haddock	8,746
“ hake and cusk	13,119
“ pollock	1,749
Total	1,749,205

LUNENBURG.

Reporter, Mr W. A. Zwicker:

Codfish appeared on the coast this season on May 2, and to the 14th were taken in fair quantities. The fishing was poor to the 23rd, owing to dogfish, which had struck inshore, and stormy weather. Fair hauls were taken on May 24, 25 and 26, with good fishing from the latter date to June 1. The schooner *Alexandra*, from Bryon island, on May 31, with a fare of 1,000 quintals, reported good fishing in that locality. Fair codfishing was reported quite regularly from July 4, to July 29, and all branches of the fisheries were dull after, to August 4, when the catches were fair to the 9th. Cod were very scarce to August 29, when the fishing improved somewhat,

SESSIONAL PAPER No. 22

and fair reports were received to September 2. Very light catches of cod were taken to the 23rd of this month, and from the following day to October 5 the fishermen made fair hauls. For the remainder of the season and to November 15 very little was done in the codfishery, owing to the stormy weather. On the whole, the in-shore catch this season is below the average. The Lunenburg Banking Fleet consisted of sixty-six vessels, and the total catch was 13,415,000 pounds, about 1,631,000 pounds in excess of last year's catch. The LaHave Banking Fleet comprised sixty-four vessels, with a total catch of 12,550,000 pounds, an increase of about 1,182,000 pounds more than last season, and twenty-two vessels were attached to the Mahone Bay Banking Fleet, whose season's catch did not average up quite as well; 2,925,000 pounds were taken the past season by this fleet of vessels, which is about 555,000 pounds below last season's yield. The combined catch of the Lunenburg, LaHave and Mahone Bay Bankers this season amounted in all to 28,890,000 pounds, which will exceed 1903 catch of about 2,258,000 pounds, and falls short of 1902 catch by 18,225,000 pounds. The total catch is considered very small the past season, which is accounted for by the great scarcity of squid on the banks when fish were going, and the prevalence of numerous shoals of dogfish, which have been on all the Banks and fishing grounds during the season. Nine vessels less, also, were engaged in the Bank fisheries than the previous season.

Haddock fishing commenced May 2, and the catches throughout the month and to June 21 were poor. Haddock struck in on June 23 quite abundantly, and to July 8 good catches were made, with the fishery dull after to the close of the season.

Herring were first reported this season when a few bank herring were going on May 25 and 27, one boat had a catch of 4 barrels. The fishing was fair from this date to June 17, and poor during the months of July and August. From September 22 to 29, herring were on the coast in large quantities and a few excellent stops were made. Some boats reported 35 barrels in a single night. This season's catch of herring is reported to have been the largest for the past six years.

Lobster operations began December 15, 1903, and the catches to January 15 were on an average fair when, owing to the unsettled condition of the weather, the lobster fishermen brought their traps ashore and did not resume fishing again until April 1. To the 25th of this month the lobster fishery was dull, and for the remainder of the season, lobsters were taken in fair catches. The catch this season is below the average. The largest lobsters caught previous to May 1 found a ready market in the United States, where they were exported alive. After this date, both the large and small sized fish were sold to the canneries, for canning purposes. The fishermen were well recompensed for their catch this season as prices ruled high.

Mackerel boats averaging 75 large mackerel and schools reported off Cross island on May 27 was the first report received of this fishery this season. Fair net fishing was reported from May 29 to June 9, and the first mackerel reported in traps were taken June 18, when 9 fish were caught. Mackerel were scarce after July 12, when one boat had 80 fish, and a few were trapped the following day. 2,000 large mackerel were taken in one trap on the 14th with 40 barrels of large fish reported on the 15th. 500, 300 and 700 mackerel were trapped respectively on the 18th, 20th and 25th, with 70 and 200 large fish being reported on August 3 and 5. From August 6 to 18, 8,100 mackerel chiefly large sized fish and 100 barrels were taken at intervals in the traps. A catch of 240 large mackerel was taken in the traps on August 25 and 26, with good net fishing reported on the 27th. Mackerel fishing by nets was reported good on the 29th, 30th and 31st, with boats averaging 100 mackerel per net, and traps reporting from 16 to 20 barrels. It was reported that 250 barrels of mackerel were taken in traps from August 25 to September 2. The total catch in both nets and traps was about 1,000 barrels which is considered below the average. The mackerel

caught this season were of a large size and nearly all the fish taken in traps this season were shipped in ice to the United States market.

Squid were first reported when one banker baited on July 15 at Rosebay, and on the 28th two banking vessels received a sufficient quantity of squid. Fair squid fishing was reported on August 13, and one craft baited on the 14th. After this date, this little bait-fish left our shores. About 200 barrels were reported as the total catch this season. Bankers reported very few squid on the banks the past season.

Dogfish were first reported on our shores May 14, and remained until October, a great hindrance to our shore fisheries. They were also a great nuisance to our deep sea fishermen, who reported them numerous in the North bay, Western, Middle, Quero, Bradley and Grand banks, and prevented to a large extent the successful operation of our banking fleet, by driving the bait-fish off the banks and destroying the trawls, which often took our fishermen two days to clear and get them ready again for setting, as well as completely ruining other gear. Our fishermen pray that the government will endeavour to procure ways and means to destroy or rid the waters of this 'pest' so that our fishing industry may be carried on in a successful manner.

The following tabulated statement contains the names of the vessels engaged in the bank fisheries, during the past season, with their respective catches :—

Lunenburg Banking Fleet.

	Lbs.		Lbs.
Commander..	180,000	Willis C..	120,000
Coronation..	385,000	Arabia..	270,000
E. M. Zellers..	190,000	Frances Willard..	140,000
Tribune..	50,000	Palmetta..	130,000
Orida..	35,000	Beatrice S. Mack..	490,000
Blanch A. C..	100,000	Uranus..	200,000
Acadia..	200,000	St. Helena..	220,000
Vendetta..	240,000	Athlon..	180,000
J .M. Young	90,000	Alameda..	90,000
Britannia..	200,000	Juanita..	200,000
Ellen F. Maxner..	140,000	Palatia	150,000
Huron..	150,000	Transvaal..	140,000
Arkansas..	440,000	Demering..	200,000
Nina..	25,000	Alhambra..	245,000
Colonia..	150,000	Mizpah..	80,000
Dove..	60,000	Hispanolia..	160,000
Deeta M..	95,000	Ahava..	260,000
Strathcona..	140,000	Baden Powell..	120,000
Tasmania..	180,000	Helen C. Morse..	140,000
Earle V. S..	140,000	Clarence S..	230,000
Minnie M. Cook	180,000	Alexandria..	560,000
Campanula..	220,000	Azalea..	220,000
Excelda..	200,000	Viking..	320,000
Aquadilla..	490,000	Alcaea..	140,000
Kandahar..	180,000	Atalaya..	140,000
Lilla B. Hirtle..	290,000	Columbia..	400,000
Muriel..	340,000	Lina F. Oxner..	160,000
Hilda C..	150,000	Defender..	300,000
Hazel L. K..	60,000	Peerless..	160,000
Mindora	240,000	Gladys B. Smith..	420,000
Torato..	160,000	Shamrock..	120,000
Lila D. Young..	300,000	Luetta..	210,000
Cardinia..	340,000	Percey Roy..	160,000
		Total..	13,415,000

Lahave Banking Fleet.

	Lbs.		Lbs.
Alice Gertrude..	260,000	Corean..	250,000
Elena..	270,000	Stanley..	140,000
Cavalier..	160,000	Electra..	240,000

Lahave Banking Fleet—Concluded.

	Lbs.		Lbs.
Marion..	210,000	Linua A..	120,000
Pearl..	30,000	May Myree..	180,000
Champion..	140,000	Ungara..	140,000
Kasaga..	80,000	Protector..	110,000
Companion	110,000	Riviera..	180,000
Karmoe..	150,000	Annie, N. W..	160,000
Vesta Pearl..	70,000	Flora W. Sperry..	85,000
Carlrairie..	240,000	Collector..	205,000
Campania..	140,000	Tidal Wave..	120,000
Parana..	350,000	Alma Nelson..	320,000
Victoria..	210,000	Ulva..	150,000
Speculator..	210,000	Latooka..	260,000
Ethel..	265,000	Moran..	200,000
Emulator..	225,000	New Era..	330,000
Roma..	260,000	Millie Mace..	160,000
Iona..	180,000	Barcelona..	160,000
Cyril..	150,000	G. R. Alston..	100,000
Glydon..	160,000	Oregon..	260,000
Oceanic..	210,000	Meteor..	300,000
Manhattan..	360,000	G. S. Troop..	220,000
Premier..	240,000	Mariner..	225,000
Lucania..	320,000	Ambition..	420,000
Maderia..	320,000	Mary E. Smith..	220,000
Calavera..	170,000	Yukon..	335,000
Golden Rod..	180,000	Effie May..	25,000
Valoria..	160,000	Marconi..	100,000
Lillian..	100,000	Glenwood	385,000
Blake..	160,000	W. C. Silver..	320,000
Icelda..	15,000	Hattie..	25,000
		Total..	12,550,000

Mahone Bay Banking Fleet.

	Lbs.		Lbs.
T. A. Mahone..	140,000	Iona W...	120,000
Fredonia..	70,000	Crofton McLeod..	90,000
Mamie Bell..	135,000	Saratoga..	280,000
Yamaska..	170,000	Roanoke..	170,000
Minnie Pearl..	190,000	Flo. F. Mader..	180,000
Clarence B..	120,000	Oressa Belle..	140,000
Vernie May..	180,000	J. W. Mills..	150,000
Palanda..	35,000	Loyal..	85,000
Clara..	280,000	Australia..	120,000
Markland..	110,000	Kimberly..	60,000
Iona..	10,000	W. S. Wynot..	90,000
		Total..	2,925,000

The following extract is from Mr. P. H. Ross' letter to the *Halifax Morning Chronicle*, re the operations of the banker fleet of Lunenburg.

'The fleet to-day is composed of some of the finest vessels afloat, ranging from eighty to one hundred tons, each schooner averaging eighteen men. They sail like yachts, and are thoroughly seaworthy, standing any amount of bad weather, and are capable of going to any part of the world.'

MUSQUODOBOIT HARBOUR, N.S.

Reporter, Mr. George Rowlings:

Alewives were very scarce in this district the past season. This can hardly be accounted for, as several good places, where there are no dams or obstructions of any kind, leaving a clear passage to the lakes, were entirely forsaken by this fish.

Cod were first taken in good quantities to May 11, with fair fishing after to the end of the month. The cod-fishery in June varied from good to fair. Many of the shore

4-5 EDWARD VII., A. 1905

fishermen were engaged lobstering when cod were on the coast, as lobsters were bringing very remunerative prices. Fair fishing was reported in July from the 4th to the 8th, with light fares to the 30th of the month. From the middle of August to September 7, codfish were reported plentiful, with fair reports on October 3 and 4. The fishermen reported they would have made very good catches during the season cod were on the coast, but when bait (herring and mackerel) struck in our waters, dogfish would put in an appearance and were so numerous that it necessitated the fishermen removing their gear to save it from destruction. Clam bait, which is a poor substitute for herring, mackerel and squid, was used. There is very little difference in the quantity of fish caught this season compared with that of last year's. The inshore fishing was not quite as good as the previous season, but the addition of two new vessels (total tonnage, 144) to the West Chezzetcook fleet made up for the shortage in the inshore fishery. These two vessels fished principally in the North bay district, the results of which brought the total catch about the same as in 1903.

Haddock were first taken May 23, fair, and continued such for the balance of the month. To the close of the season haddock fishing was identical with that of the cod-fishery.

Halibut in small quantities were taken in August, from the 3rd to the 9th, and in September fair catches were taken on the 3rd, with good fares on the 7th. Halibut were not as plentiful this season as last.

Herring appeared in fair quantities on May 30 and remained fair to June 1, when small catches were taken to the end of the month. A few herring were stopped between July 4 and 8, and on August 30 fair fishing was reported. The herring fishery varied from good to fair the first week in September, and small fares of herring were taken October 3 and 4. A larger quantity of herring was taken this season than last, but of the total catch of 1,856 barrels, about 425 barrels of small herring were utilized for lobster bait. These fish were caught at Clam harbour.

Lobsters.—From the first appearance of lobsters in May, the catches each day were exceedingly good to the end of the month, when the fishing became fair and remained so until the close of the season. More lobsters were caught this season than last, and this fish seems to hold its own very well. The past season was very favourable to the lobster industry, as the weather was not too rough. One thing is certain, the law regarding seed lobsters is very well observed, and no violations whatever occurred during the close season. Owing to a decline in the price of live lobsters, the shipments to Boston were considerably less. Many of the factories canned the lobsters intended for that market.

Mackerel.—The mackerel fishing was about the same as last season—dull. What mackerel were taken when this fish was on our shores, were caught during the spring and summer months. Scarcely any were reported this fall.

Salmon were first reported in light catches on May 26, and on June 1 salmon were reported plentiful. From the 3rd to 29th of this month fair catches were taken quite regularly, with small fares reported in July from the 4th to 8th. Salmon-fishing was better this season than last year, especially at Musquodoboit harbour. A large quantity of spawn salmon went up the Musquodoboit river this fall.

Trout.—Good trout-fishing was reported in June, on the 27th and 29th, with small fares on July 8. The trout season has been considered a fairly good one this year.

Smelts.—It is not known whether this fish were more plentiful last season than in previous years. Many more are now caught, but this is owing to several small nets (bag-nets) being set at Musquodoboit harbour. Last winter was the first season these nets were used, and they worked successfully.

SESSIONAL PAPER No. 22

During the past season, the quantities of fish taken in the district, from Dartmouth to West Ship Harbour, is estimated as follows:—

Alewives..	131 barrels.
Cod..	5,703 cwt., dried.
“ sounds..	4 barrels.
Haddock..	113,100 pounds, fresh.
“	696 cwt., dried.
Hake..	76 “ “
Halibut..	17,825 pounds.
Herring..	1,856 barrels, salted.
“	26,500 pounds, fresh.
Lobsters..	1,330 cwt., fresh in shell.
“	87,624 pounds, canned.
Mackerel..	14,300 “ fresh.
“	135 barrels, salted.
Salmon..	4,056 pounds, fresh.
“	346 “ salted or smoked.
Pollock..	349 cwt.
Trout..	4,900 pounds.
Fish as bait..	686 barrels.
“ oil..	2,164 gallons.
Smelts..	39,500 pounds.
Clams..	831 barrels.
Flounders..	75,800 pounds.

This district includes the fisheries of Dartmouth, Eastern passage and Devil's island, Cow Bay and Lawrencetown, Seaforth and Three Fathom Harbour, West Chezzeticook, East Chezzeticook, Petpeswick Harbour, Musquodoboit Harbour, Jeddore, Clam Harbour and Owl's Head, and West Ship Harbour.

Sixteen vessels with 128 men and 560 boats with 361 men employed followed the fisheries of these stations the past season. Four lobster canneries with 19,200 traps attached, valued at \$7,830, and giving employment to 61 hands, are located in this district, as well as 296 smoke and fish-houses, with an estimated cost of \$6,675.

Alewives were reported a total failure during the past season.

Codfish were scarce the early part of the season, and the fishermen were busily engaged for a couple of weeks, after the close of the lobster season, clearing up the lobster gear, to be in readiness for net and line fishing. Handlining only commenced about June 14, with the fishing fair, and on the 21st some of the smaller shallops got from 1,000 to 2,000 pounds of cod. Fish were now very scarce, and it was reported on the 30th that it was seldom a boat with a crew of three men landed a quintal of fish. The codfishery improved in July from the 8th to the 20th, when fishing was reported fair, with the fish of nearly half large and medium size. Dogfish appeared in large numbers on the 21st, and were very troublesome, reducing the anticipated catch of cod to fair and poor during the remainder of the month, and to the 20th of August, when shallops reported fair codfishing and plenty of large herring 20 miles off shore. The report of July 27 contained information stating that the Italian barque *Leone* was ashore near Baccaro, which was the first and only news received in the city about the stranding. On the boat grounds food fish of all kinds continued scarce till September 6, when the fishery improved all around and remained fair for about ten days whenever the weather was favourable for boats to reach the grounds. About the middle of September a school of large cod and pollock struck the inshore grounds, and the boats had good to fair fishing for a week. Codfish were scarce the last week in September, and continued so to the end of the season. The latter part of October has given fair line fishing when the weather permitted, and herring was reported more plenty inshore than at any other period during the year. Dogfish had followed the herring inshore, resulting in much destruction to nets and annoyance to line fishermen, as well as reducing the catch of both cod and bait fish. Mr. Crowell,

4-5 EDWARD VII. A. 1905

reporting at length, says: 'My observation leads me to conclude that the "improved" boats the line men use are a disadvantage to them at this season. These boats cannot get on the grounds without wind, and at this season it is generally calm in the morning, if it is a fish day at all, so these improved boats get there, if at all, several hours later than those that the owner's grandfathers and fathers used to sail or row. In fact they are too large to row, and too small to remain out over night, or at least the owners, who are supposed to be the best judges, say so. They have neither the advantage of the smaller boats in getting about quickly in very moderate weather, or the ability of the larger vessels to stay on the grounds when they do get there. These boats are built for lobstering, and are suitable for that purpose only. Vessels would do fairly well wide off-shore if they would stay out, but our fishermen will not remain out should the weather be any way boisterous, or if fish happen to be scarce for a day or two; consequently, when a school of fish strike in with the weather calm or a light air from the south the vessels are frequently in the harbour unable to make the fishing grounds for several days. If the department had a factory turning out "ambition" at a cheap rate, and the men could be induced to invest in the article and use it, a vastly different showing would be made in the in-shore fishing. These same men go to the "United States" and come down here in American vessels, and are all right. Apparently pushing captains are the "missing link."'

Haddock.—Fair haddock fishing was reported in June on the 15th and 17th, and in July on the 8th and 9th, with good reports for a few days about the middle of the month. The fishery slackened after to fair and poor, and continued to fluctuate between these latter points during the remainder of the season.

Halibut.—Very light catches of halibut were taken in July, with fair reports received on September 8th, 24th and 26th.

Lobster fishing the past season was not considered quite up to the average, but as fair prices ruled the fishermen did not complain. They are indignant, however, over the fact that they are paying duty on their rope, while the report is current that the New Brunswick lobster fishermen are getting theirs in free of duty.

Herring.—It was reported on the 22nd, and the latter part of June, that occasionally a few herring were on the off-shore grounds, ten miles distant, and by the report of July 20 a sufficient quantity of herring for bait purposes were taken by some shallops 15 miles from the mainland. A few boats attended the fisheries on the 21st, as some of the fishermen were hay-making; but those who went out found nothing but dogfish, which were very plentiful. A decided change for the better in this fishery occurred on the 22nd. A number of boats secured a sufficient quantity the previous night to partially supply others who were not quite so successful. Some small herring struck in the harbour on July 30, and enough were caught for baiting, and a quantity, probably 100 barrels, were salted down to be used later in the season in the lobster industry. There were also some bait wide off-shore on August 6, but not plenty. The nets about the harbour on which the boat fishermen depended for herring bait were a very uncertain reliance; occasionally enough were taken to supply all the boats, then none would be stopped for several days, or rather nights. Fish were very scarce the latter part of August, and the boatmen who went out when the weather was favourable secured about one-third of a cwt. of assorted fish, mostly small, a man per day. Quite a number of the men preferred the 'Blue-berry Barrens,' and they cleaned up probably fully as much, as there was a scarcity of fish, with an abundance of 'Berries.' Large quantities of the latter commodity were shipped to the Boston market via the Yarmouth Steamship Company. Herring in large quantities struck in shore September 17, and the boats averaged about 100 fish per net. Several small stops of herring were taken to October 8, when it was re-

SESSIONAL PAPER No. 22

ported that herring have evidently left the grounds, with the large fish in pursuit. On October 17 the weather was fine, with a smooth sea running, and at daylight boats and shallops were noticed leaving the harbour for the off-shore fishery. The official season closed on October 15, but not necessarily by any means the fishing season. Our reporter thinks the season is not too far advanced for herring and fat mackerel, and has known the fishing industry to be prosecuted very successfully up to the Christmas season, but this is the exception. Should weather and bait be favourable, there is time yet to make a good voyage.

Mackerel were very scarce at this station the past season, and on October 8 it was reported that one mackerel was caught the first of the week, but his companions had not yet been heard from. Mr. Crowell reports that herring and mackerel have so far been nearly an entire failure at this station, and the lobster fishermen will be dependent, to a great extent, next season upon the north shores of the Bay of Fundy for their bait.

Pollock were small and scarce the early part of the season and continued so till the middle of September, when a marked improvement was assured. For the balance of the season pollock of a large size were in fair quantities, and brought good prices.

Squid have not been much in evidence during the season, but dogfish have been an ever-present quantity. Their manufacture into an improved breakfast food has not yet materialized.

Cusk were reported as having been taken from June 30, in good supply, to the close of the season.

On the whole, the fishermen who have diligently pushed their business have had something like an average season; while those who were discouraged by a succession of poor fishing days and remained at home frequently when fish were reported scarce on several occasions missed a good day's fishing in consequence, and have not panned out so well. Time and chance, however, have happened to all as in other years.

The following statement will show the quantities of fish caught at this station during the past season :—

	Pounds.
Codfish, total catch..	391,000
Haddock, total catch (including cusk and hake)..	270,000
Halibut, total catch..	3,000
Pollock, total catch..	83,000
Herring, total catch..	167,000
Mackerel, about 50 fish (not barrels).. . . . .	.....
	<hr/>
	914,500

The above is the total weight after the fish were cleaned and previous to being salted.

PUBNICO EAST, N.S.

Reporter, Mr. J. A. D'Entremont.

Codfish were taken in small catches in the month of May up to the 27th, when fair hauls were reported to the 31st. The month of June was a poor one for the codfishermen, and cod were very scarce until July 16, when good catches were made, which continued to August 3. The fish left the shores in this district for a few days and reappeared on the grounds in large quantities, and several large hauls were taken on the 10th and 20th of the same month. To the close of the season the codfishing was reported to have been, on an average, fair.

4-5 EDWARD VII., A. 1905

The following is a list of vessels engaged in the codfishery, with their respective catches :—

	Pounds.
<i>Aurore</i>	150,000
<i>Arbutua</i>	120,000
<i>Eddie J.</i>	150,000
<i>Laura J.</i>	130,000
<i>Nelson A.</i>	155,000
<i>Marguerite</i>	100,000
<i>Souvenir</i>	160,000
<i>Senora</i>	100,000
<i>Greenwood</i>	75,000
<i>Geneva May</i>	75,000
<i>Ellen M.</i>	35,000
<i>Mabel A.</i>	20,000
<i>George</i>	45,000
<i>Henry L.</i>	30,000
	<hr/>
	1,345,000

Lobster season opened with light catches until May 9, when they became fair and remained so until the 27th, when poor catches were again made. There was very little change in the lobster fishery until the close season. There were six factories in operation in this district the past season, and the average pack is estimated at about 1,200 cases each. Nearly all the live lobsters exported to the United States are taken to Yarmouth in lobster smacks and shipped thence to Boston.

Alewives.—Good catches of alewives were made in May from the 9th to 16th, when the fishery became fair to the 27th. Fair catches were again reported to June 22, from which date to the end of the month the catches were small. The catch of alewives the past season was reported an average one.

Halibut.—Small catches of halibut were taken from June 22 to July 12, when fair fishing was reported to August 26. The catch was small after this date to the end of the fishing season.

Herring.—The first news received of the fishery was on August 3 and 5, when small stops were made. A few herring were also taken in September and October. The season's catch of herring was a small one.

Haddock.—Fair catches of haddock were reported on June 23 and 24.

Mackerel.—The mackerel fishery is reported a failure again this season. The fish were first reported on May 31, when 25 mackerel were taken in nets. Light catches were also made about July 1.

Ice was reported in good supply during the fishing season.

Bait.—Herring bait by fishermen's net was reported obtainable at Mud island on September 12, and at this station on October 5, 8, 14 and 15.

The season's catch, although hardly considered satisfactory, is reported to have been made an average one by the good prices realized by the fishermen for their fish.

PORT MULGRAVE, N.S.

Reporter, Mr. David Murray :

Codfish.—The past season opened poorly for all kinds of fish, particularly in Chebucto bay, where the wind was north-east and cold and greatly retarded the

SESSIONAL PAPER No. 22

mackerel fishery. By the report of May 14, several bankers arriving from first and second baiting reported from 175 to 500 quintals of cod. One vessel, the *Bertha A. Mack*, from Cape North hailed for 1,100 quintals, and reported good fishing in that locality. Handliners finding fish scarce on our shores left for this fishing ground where fish were said to have been plenty. Codfish were scarce in the North bay fishery the latter part of May, as the *Nellie J. King*, of Shelburne, which arrived in sailed about the 28th for bank *Querro*. The first week in June, the Lunenburg bankers homeward bound reported from 400 to 1,100 quintals. Three Gloucester fishing crafts leaving for home on the 6th hailed for 160,000 pounds (shack) fish each, caught at Cape North and up the gulf. The *Ida M. Clark* was in on the 10th from the North bay grounds with 200 quintals by handliners. Several bankers the past week (June 20th) from the Magdalens in port, report small catches, only a quarter of a trip, some only 200 quintals. Bait was very scarce during the month of July and very little fishing could be done. It was reported on August 1 that many handliners fishing on clam bait were fortunate in securing about half a trip. Vessels operating the Labrador fisheries by report on August 22, had fairly good voyages. The schooner *Britannia* hailed for 1,100 quintals of cod and the *Mary C.* for 150 barrels of herring, 450 quintals of cod and 400 cases of lobsters. The North Bay fishing reports were not very encouraging and on September 5 vessels arriving from this locality reported fish and bait a failure. The schooners *Clara Ernst* and *Glenwood* reported on September 12 respectively for 1,300 and 1,350 quintals of cod. The handliner *W. C. Silver*, on a four and a half months' trip sailed for home on the 18th. the following day the schooner *Columbia*, of Lunenburg, sailed for home, and reported a fair trip all the season. Five Lunenburg vessels left for home on Saturday, October 8. They had been operating off the eastern end of Prince Edward Island with very poor results. Nothing was afterwards reported, as all the vessels had left the fishing grounds.

Herring were very scarce on our shores the past season, but vessels arriving from the Magdalens report this bait-fish very plentiful; there were crafts baiting at \$4.50 per dory load. Four baited at the Magdalens on the 2nd, and the *Emulator* and *Clarence Smith*, after securing a sufficient quantity of herring sailed for the banks. The first herring news on our coast was received on May 6, when this fish was reported as having struck in off Harbour-au-Bouche. The schooner *Oregon*, which arrived in on the 9th from the Magdalens, reported a good run of herring there. It was also stated that 30 bankers baited at the Magdalens on Saturday the 7th. The last arrival from the above fishing grounds, the *Defender* reported paying \$6 per dory-load for herring. It was reported on May 14, that herring had been very plentiful at Harbour-au-Bouche, to such an extent that one could dip them up by the aid of scoop nets. Good fishing for herring was again made in the same locality about the 16th and 17th. From the Magdalen isles came the reports that ice came back into the harbours and bays and greatly interfered with netting and lobstering. Herring struck off shore about June 7th, and a small catch was reported at Port Malcom on the 27th, part of which was secured by the Gloucester vessel *Tacoma*. Bait was scarce during July, and the *Transvaal* on August 1 reported 400 quintals of codfish taken on a baiting obtained on clam bait got one half trip and were in port on the 1st, in quest of fresh bait. No fish and scarcity of bait was reported after by all crafts arriving from the North Bay.

Lobsters—From the first appearance of lobsters on the coast to the close of the season, the average catch was fairly good. Only one factory operated this past season, and the output was 980 cases, with prices ruling good.

Mackerel made its appearance about May 28 in Chedabucto bay and Cariboo cove, when a few were taken in nets. Mackerel were next reported the first week in June about 10 to 15 miles offshore. The best seine-fishing was now between L'Ardoise and

4-5 EDWARD VII., A. 1905

Canso, wide offshore. To date our net-draggers were reported as having done very little this spring, and very few were caught in nets. On June 13, Captain Chester, of the tug *Anson M. Bangs*, reported having passed through schools of mackerel between Liscomb and Canso which were being pursued by two seiners. This was about the only important news concerning this fishery received, and the run of mackerel at this station, the past season, has been considered a failure. One U.S. vessel, the *F. W. Nomans*, netting mackerel in the North bay district, landed 207 barrels on her first trip. She sailed for home after completing her second trip, which consisted of only 57 barrels, and reported the mackerel voyage a failure everywhere in the North bay and around the Island of Cape Breton.

Alewives were reported as having made an appearance on or about the same time as mackerel, May 28, in Chebucto bay and Cariboo cove. The quantity was very small.

Pollock were reported being caught on the coast on June 7, and on the 20th of the same month were taken at or near Cape Porcupine.

Dogfish.—Mr. Murray, reporting on this very important question, of vital interest to the fishermen of this province, writes as follows:—‘A great deal has been written and said about dogfish destroying other fish. In the spring and early part of summer we neither had fish or dogfish. Years ago (1853 and 1854) we had dogfish as plentiful as this year, and thousands of barrels of mackerel and herring were caught. If less old, rotten lobster-bait were used in the traps, we would get more fish inshore in nets than are now being caught.’

Mackerel net-fishing has not commenced to date (October 15), and, in all, our fishermen have done very little this past season. Present prospects look dull.

SALMON RIVER (PORT DUFFERIN), N.S.

Reporter, Mr. Arthur Balcolm:

Alewives first appeared May 23 fair, and were taken in light quantities to June 7.

Cod.—First appearance on the coast was on May 18 in light numbers. From May 31 to June 15 good catches of cod were taken. For the remainder of the season, owing to the unsettled state of the weather, the catch was on an average fair. It was reported that of the fifteen days in October (the closing of the F. I. Bureau's operations the 15th) only five days were favourable to the fishing industry.

Haddock this season were very scarce and consequently were not reported.

Halibut.—Light catches of halibut were taken in May, on the 30th, with good hauls the next day. In June, to the 16th, the catch varied from good to fair, and from fair to poor to the 29th of the same month. Light catches of halibut were again reported in July, from the 4th to the 20th.

Herring appeared in good quantities on May 31 and remained the same to June 9. Herring were scarce after, for the balance of the season, excepting a few fair stops on August 5 and 11.

Lobster fishing reported May 3 very satisfactory, and some good catches were made. The fishery became fair after this date and remained so to June 18, when the catches diminished to the close of the season.

Mackerel appeared at this station in fair quantities on May 28, 30 and 31, with this fishery in a fair condition to June 8. Several light stops of mackerel were taken

SESSIONAL PAPER No. 22

to June 18, after which the mackerel fishery was poor until the month of August, when fair catches were taken on the 5th. Mackerel in small quantities were reported on August 6, 29 and 30. Nothing was afterwards reported.

Salmon fishing was reported fair from May 30 to June 13. Very light catches were taken the remainder of the season.

Squid did not visit this station the past season.

Trout were taken in fair quantities at this station the past season to July 10, with poor fares to the close of the season.

Smelts.—Very light quantities of this species of fish were taken the past season.

Bait.—Herring bait in traps was reported at Tuffin's island and Smith's cove on August 5. Bait was very scarce at this station during the months of September and October.

Dogfish appeared on the coast July 4, and, as a result, all branches of the fisheries became very dull.

The following is a statement of the quantities of fish taken within this district the past season:—

Alewives..	50 barrels.
Cod..	2,000 cwt.
Halibut..	5,000 pounds.
Herring..	200 barrels salted.
Lobsters..	200,000 pounds, fresh in shell.
Lobsters..	700,000 " canned.
Mackerel..	20 barrels salted.
Salmon..	2,000 pounds fresh.
Fish as bait..	50 barrels.
Fish oil..	1,000 gallons.

This district comprises the fisheries of Sober Island, Beaver Harbour, Port Dufferin, Quoddy, Harrigan Cove, Moser's River and Ecum Secum. Seven vessels and 250 boats prosecute these fisheries, giving employment to 40 and 400 men respectively, and six lobster canneries established along this coast employ 110 hands to operate 30,000 traps, with a valuation of \$10,000.

LESLIE'S BAY (SPRY BAY) N.S.

Reporter, Mr. John A. Leslie.

Cod first appeared on the coast about May 5 in light quantities, but it was reported on May 7 that this branch of the fisheries was not extensively operated. Cod were in fair numbers on May 9, 14 and 17, but the weather was so rough and stormy that very little had been done. Bait was also scarce about now, and only a few small herring and clams were used for that purpose. Codfish struck in the latter part of May, and on June 4 were reported plentiful about 12 miles off headland. From the 15th to 18th, inclusive, the catches were much better, varying from very good to fair, but just as the fishermen began to do fairly well dogfish made its appearance in great numbers, which of course put an end to net fishing, as well as making cod-fishing very difficult. For a month following there was practically nothing done. All kinds of fish were scarce, excepting dogfish, which were more numerous. A few very nice looking codfish put in an appearance in August, and the fishermen were of the opinion that the catches would be good should herring strike in, of which there were

4-5 EDWARD VII., A. 1905

very fair signs. Cod of good size were taken the first week of September, with good prospects, but dogfish were still hovering around the shores. The fish were found the 10th of September on the shore soundings in good numbers, having left the in-shore for deep water, but the cod were so far off-shore that small boats could not possibly venture forth to catch them. The cod-fishery was so dull October 1 that some of the fishermen stopped fishing for the fall. The following week a few fish of a small size struck in for two or three days, but the greatest difficulty now was a scarcity of bait.

Halibut.—The only report of halibut at this station the past season was when they were in light quantities on September 1.

Herring.—Small herring were reported being used for bait on May 7, and on the 24th it was reported that herring had struck in off this station. Herring bait by fishermen's nets was also reported on the same date. Herring were taken in June, but no large quantities were reported anywhere in this immediate district. Dogfish appeared the latter part of June and put an end to net fishing. Several small catches were made in August, and on September 10 herring were reported on the grounds, but the fishermen could not set their nets in the shoal and best waters on account of dogfish, which were more numerous there than in deep water. Few fair stops of herring were made on September 12 and 13, but since the 14th gales of wind were so prevalent that the fishermen could not get to their nets. A large boat which arrived in on September 17 from the grounds reported that herring had entirely disappeared from there, and dogfish were more numerous than ever. They were reported schooling on top of the water, and could be hooked from the side of the boats. Herring were on the grounds again the 1st of October, and as soon as they were held fast by the nets dogfish were on hand to devour them, as well as destroying the gear. Mr. Leslie in reporting to the bureau says: 'At the beginning of the season it looked as though it would be a banner year, as cod were plentiful, and of a superior size, and prices ruled high. Next came herring, which were of an excellent quality, and some good catches made. Fishermen were happy and smiling and everything looked bright, when along came the dogfish and drove the herring entirely off the grounds into very deep water. It was some time before the fishermen knew where the herring had moved to, and on placing their gear into deep water they found to their disgust shoals of dogfish and no herring.'

Lobsters first appeared about May 2 and light catches were taken regularly until the season closed. The lobster season has not been an average one, not because lobsters were any scarcer than a few years ago, but the general opinion is they have more attractive food at home in a very small fish that clings to the bottom, on which they feed.

Mackerel were first observed schooling off this station on May 28, and the United States mackerel fleet was reported in close pursuit. Fair fishing was reported on May 30, and mackerel were scarce after until it was reported that a few fish were striking in west on October 8, followed by schools of dogfish. Since then fishing has been almost nil, and once cold weather sets in operations will cease at this station.

Squid.—A few squid were reported caught east on July 16, which were expected would prove very helpful to the fishing industry, but squid was very scarce along this coast throughout the entire fishing season.

Trout.—Fishing was reported very good May 30, with catches varying from very good to good to June 17.

Dogfish put in an appearance on the coast about June 25, and were in large quantities throughout the fishing season. It was reported on July 30 that some boats had

SESSIONAL PAPER No. 22

taken as many as 250 fish out of a single net. The fishermen are very much discouraged, and our reporter says it is really necessary for the government to bring relief in some way.

WHITEHEAD, N.S.

Reporter, Mr. J. E. Dillon.

Alewives were first taken on the coast this season about May 14, when a few were netted with herring off this station and Port Felix. Light catches were taken May 23. and on June 18 fair fishing was reported. The total catch for the season was about one-third of last year's, and is estimated at 50 barrels.

Cod.—There was also a falling off on the codfishery the past season at this station, which is attributed to the scarcity of bait the first part of the season and the 'dogfish pest.' The first report of codfish received was on May 4, when one boat made a haul of one quintal. A scarcity of bait was a great drawback to the fishermen about this time, and all branches were dull until Saturday the 14th, when a boat operating the cod and haddock fishery reported seven quintals, taken on trawls. Very few fish of any kind were caught the latter part of May on account of the rough state of the weather. Unfavourable weather conditions continued the first of June, and the fishermen expected to make good hauls should there be any change in the weather. Line fishing was very dull until from the 14th to 18th, inclusive, during which time fair catches were taken. Cod were very scarce also in the month of July, and the only fair report was on the 16th. The August catch varied from fair to poor; but the catch in September was somewhat better, and were on an average fair when bait was obtainable. Very few fish were taken in October on account of the roughness of the weather and scarcity of bait. The total catch is estimated at 800 quintals.

Haddock were first reported May 14 fair, but the catches throughout the season were reported light for the same reasons which attended the codfishery. About 325 quintals of haddock were reported for the season.

Halibut.—This fishery was not regularly reported the past season, but about 12,000 pounds would represent the total catch.

Herring were reported very scarce early in the season at this station. The first signs of herring were reported when from 35 to 40 fish were netted about the middle of May. Herring were scarce after until they re-appeared on the coast in June. It was reported on the 11th that two Lunenburg bankers baited here the past week. On Friday evening, June 15, herring struck off-shore in fair quantities, and the following day boats were averaging from three to six barrels. Some fair stops of herring were made in shore in August to the 6th, but the fish were driven off by dogfish, which were on the coast in very large numbers. At Tor Bay, one morning of the week of August 13 from six to ten barrels of herring were caught with a very small stop at this station. A few stops of herring were taken the latter part of August and early in September. In October on the 8th, one boat reported one-half barrel, and on the 12th a good run of fish was going with the herring fishermen reporting from two to seven barrels. Five hundred barrels of herring were reported taken the past season, which is considered much better than that of 1903.

Lobsters were first reported May 2, in light catches on account of the high winds which prevailed. From May 4 to 26 the fishery varied from fair to poor. To June 17 lobsters were reported fair, but afterwards to the close of the season small catches were taken. It was reported that, owing to rough weather and a scarcity of bait, the lobster-catch was smaller this season in comparison with other years. The number of cases packed is estimated at 1,700, or 300 cases below that of last season.

4-5 EDWARD VII., A. 1905

Mackerel first appeared this season on May 23, and to the end of the month the mackerel catches were reported fair. It was reported on May 30 that the American seining fleet was off-shore, accompanied by the Fisheries Protection Service cruisers *Osprey* and *Kingfisher*. Some of the mackerel fishermen were said to have made large hauls. During June and July the catches were rather irregular, but varied from good to fair. A few boats operating off this station on July 29 and 30 made catches of mackerel varying from 100 to 200 fish. The only report of mackerel during the month of August was when 2,000 fish were taken in a trap on the 8th. Estimated total catch, 150 barrels, or 25 barrels less than last year's catch.

Squid were first reported this season when two barrels were taken in the traps. The schooner *Agatha*, of Shelburne, procured the contents of the traps and proceeded to Arichat to complete her baiting. Seven barrels were taken in a trap on August 6. This bait fish was again reported later in the month, on the 25th, on the fishing grounds, but were hard to jig. Good quantities of squid were again on the grounds on October 8, but few were reported taken.

Bait was very scarce the former part of the season, and two small cargoes of herring from Harbour Bouché and Port Hood were readily disposed of to those engaged in the lobster industry for bait purposes. Herring and clams were used in the month of May; mackerel in June; herring, mussels and clams in July; herring and squid to the middle of September, and the squid for the remainder of the season.

Dogfish continued plentiful along this coast the past season and were a great hindrance to the fishermen.

YARMOUTH, N.S.

Reporter, Mr. F. L. Hatfield:

Alewives fishing during the month of May was reported on an average fair, with light catches taken in June. Taking the alewives season all through, the catch was a good one and prices were well sustained.

Codfishing began fair in the month of May, on the 2nd and 3rd, and on the 5th a fair catch of small cod was taken by local boats. Good quantities of fish were on the coast on May 7, and the catch to the end of the month was on an average fair. Fair codfishing was reported in June, on the 7th and 13th, with very good hauls being taken on the 10th. The fishing slackened off a little to July 2, when fair reports were again received. Codfishing by local boats this season was considered better than last year.

Haddock.—Very light quantities of haddock were reported in May, but the catches during the months of June and July were identical with the codfishery. On September 9 it was reported haddock struck in off Port Maitland, and boats were averaging 200 fish. This fishery was also reported in a better condition than the preceding season.

Halibut fishing was reported very fair during the month of May and the early part of June.

Herring.—A few barrels of small fat herring were taken on July 2, but afterwards were scarce to the 18th, when bait was reported at Yarmouth bar, with nets averaging two barrels. Herring continued to be plentiful at the bar on the 20th, and fair fishing was reported on the 27th of the same month. Herring of a large size were reported striking in at Port Maitland on August 27; some nets had one barrel each. The much-needed fall herring did not come in shore worth speaking of. Some large herring were caught, however, by vessels about 20 miles off-shore.

Lobster-fishing was reported good on May 2 and 3, with fair reports to the close of the season. The actual catch will probably be larger than last season, on account of more men and appliances being employed in this fishery.

SESSIONAL PAPER No. 22

Pollock.—Large quantities of medium-sized fish were caught in mackerel-traps early in the season. The fall school of large pollock was reported not quite up to the average.

Mackerel.—The first mackerel news received from this station was on May 13, when Cranberry Head trap pursed in the evening for 2 mackerel. 200 fish were taken by two traps on the morning of the 17th, and about 600 mackerel was the catch of the 4 traps on the 18th. 500 were caught on May 25, when Cranberry Head trap reported 12 ice barrels. 30 ice barrels were taken from one trap the following day, and on the 30th one trap pursed 400 mackerel. Iron Mine and Cranberry Head traps had each 100 and 150 fish on June 10, with the fishery dull to the 14th, on which date from 200 to 500 mackerel was the average of the traps. A catch of 100 mackerel was made by two traps on June 18, and to the end of the month small fares were taken. For the balance of the season in this county, mackerel fishing was nearly a blank.

Salmon were reported very good in May on the 26th and fair on June 7. The catch was very fair for the season, with good prices prevailing.

Trout.—Very good trout fishing was reported May 3, with good fares on the 7th and 26th. Fair fishing was reported June 7th and July 2.

Shad were reported a good average catch this season with 'grand' prices prevailing.

Smelts and Eels.—A goodly quantity of these species of the finny tribe were shipped to the Boston and New York market during the past winter, where prices were presumably good.

Dogfish were reported at times very plentiful and troublesome as usual.

WEST ARICHAT.

Reporter, Mr. C. P. Lelacheur :

Alewives were reported a total failure this season.

Codfish made their appearance in our bay at about the same time as in other years, and catches varied from poor to fair all through the season ; the total catch being small. Bait has been most generally scarce, and day after day our fishermen were compelled to return from their nets not having found a fish in them to bait their lines. Again the dogfish have been very troublesome, generally making their appearance with the schools of cod and other line fish following the same bait, and as usual causing destruction to nets and lines. These two causes, as in other years have worked against our fishermen this season, and is chiefly the reason of the small catch of cod.

Haddock have not been plentiful at this station. The catch was light throughout the season. None were taken in nets.

Herring were late striking in on our shores this season, but a few herring of fine quality were reported in the bay the last week in June, and the fishermen were daily expecting the school to strike in. Bait was now very scarce until herring struck in on July 16, when netters were averaging from 100 to 800 herring per boat. The catch, however, did not appear to have been regular, and as dogfish were on the coast and very troublesome the fishermen were afraid to set their nets. A few very large and fine herring struck in the week of July 23, but only for a couple of nights as dog-

4-5 EDWARD VII., A. 1905

fish in large numbers again followed the schools and drove the fish away. These pests were also reported plentiful on the codfishing grounds. A dense fog later covered the bay nearly all the week, and consequently the fishermen have found it difficult to locate the proper fishing grounds. Quite a quantity of small herring five to six inches in length were observed schooling in the bay, and on July 30, it was reported that fair catches of herring were made during the week. The fishermen say it is difficult to follow the course of the herring. Some mornings they are caught close inshore, and perhaps the next day they are found far out in mid-bay. This may be due, our fishermen think, to dogfish harassing them. Several Nova Scotia and American fishing vessels have been about seeking bait lately, and a few were very fortunate in securing the quantity they required. The best herring fishing was reported between August 8 and 15, and three vessels secured full baiting. Good herring fishing was reported at Cape Auget, five miles distant on August 18, and large hauls were being made when the voracious dogfish came along and cleared the grounds of this invaluable bait fish. The fishermen were now obliged to remove their nets, as the fish had left the shore for the season. The total catch is small, though somewhat better than last year. Some difficulty was again experienced in curing the fish as many of them after being salted proved soft backed, making them unfit for market. Several theories are advanced as to the cause of the herring turning out bad, and experiments have been made in different ways of putting them up; but so far no satisfactory method has been found, and our fishermen are as far at sea as ever. It is undoubtedly a matter for the government experts to examine.

Lobsters.—Owing to the presence of drift ice along our coast during the month of April, our fishermen were prevented from setting their traps as early as usual, and consequently very few lobsters were taken during that month. The fishing, which may be said to have begun about May 1, was poor at the start, and although it rallied a little during the latter part of May, continued poor all through the season. In a report to the bureau, dated May 21, it was stated that the catch of lobsters was fair on the 16th of the same month, but the fishing was poor during the remainder of the week. The weather had been rough, and that to some extent had interfered with the fishing, but the fact was there were few lobsters on the grounds to be taken. Around Thomas' Head, Rabbit island and the western end of the Lennox passage generally the fishing was much better than at this station, and good fishing was reported the same week along the Straits' shore from Bear island to Point Tupper on the east, and from Steep creek to Sand point on the west. Our reporter adds: 'Were it not for the high prices paid for lobsters this season (\$4 per 100 pounds) the fishermen operating at this station would have to give up the work. As it was, some of them commenced removing their traps ashore, finding fishing impossible to even make \$1 per day. A larger number of fishermen engaged in this industry this year, fully three times the number of previous seasons, and our coast area being limited could not accommodate them, with the result that the over-crowding of this territory made lobstering a disastrous season's work. Although lobsters were scarce in this immediate vicinity, the catch along the Straits of Canso shore, and west end of Janvrin's island, was fairly good, and consequently the packing establishment at this station through their smacks collected a large number and did a good business.

Mackerel catch was very light at this station the past season. On June 11 it was reported that the fishing in this branch was about over, and it had proven to be a failure along these shores. This caused great disappointment to our fishermen, especially those who were encouraged by the good catches of last year, and had made extensive preparations for this season's fishing. The weekly report of October 8 informed us that there had been a few medium sized mackerel going on our coast, and one fisherman was successful in securing 130 barrels on the morning of the 4th.

Pollock.—Large schools of these fish have daily frequented our bays and coves during the past summer, but the quantity caught was not large, as the fishermen did

SESSIONAL PAPER No. 22

not pay much attention to this fish. Pollock were reported plentiful September 26 and 27 at Petit-du-Grat and Cape Auget; but the school did not reach as far west as this station.

Dogfish were on the coast in July in very large quantities, and were very destructive to nets in the early part of August. They were reported continuing on our shores to the great annoyance and vexation of the fishermen. Our reporter was informed on August 27 that one merchant of Petit-du-Grat had begun the work of canning these fish to fill a few small orders from New York.

Bait.—Scarcity of bait was a serious drawback to the fisheries during the fishing season. About the middle of June, a little before herring arrived in the bay, clams were the only bait obtainable, but they are difficult to get, tedious to use, and not at all a lasting bait. Fishermen only use them as a last resort. When herring were going at this station bait obtainable was reported on July 16, 18 and 25, and in August on the 4th, 8th, 13th and 15. A few squid were picked up along the shores of this station and used for bait on September 3, but it was reported that cod and haddock apparently were not partial to them. One fisherman on October 3 gathered three barrels of squid, and others also secured a few barrels, which were sold to a merchant of Port Mulgrave at \$1 per barrel. This was considered early for squid to run ashore.

The fishing season closed early at this station this season; in fact scarcely any fish were taken since September 15, excepting the few fares mentioned in the foregoing accounts.

CHETICAMP, C.B.

Reporter, Mr. Chas. E. AuCoin :

In accordance with your instructions, I respectfully beg to submit my detailed annual report on the fisheries of the present season, which were operated at the following stations, viz.:—Cheticamp proper, Cheticamp island, Grand Etang, Cape Rouge and Pleasant Bay.

The Gulf of St. Lawrence was cleared of ice on April 19, although the latter had detached from the shore in big floes, moving to and fro, since the beginning of that month. The weather was remarkably cold then. The lobster-trappers began to venture in setting traps, but, owing to ponderous ice-floes coming in contact with their rope and other gear, they unfortunately had to raise them for a considerable time, after having sustained some serious damages. There was no actual setting of traps before the last of April. The months of May and June were quite productive in the capture of lobster, and hauls were made ranging, on an average, from 170 pounds to 200 pounds per boat. Seldom have I seen the catch so steady and the quality so marked. Were it not for the lateness of the spring and its cold, foggy weather, which is a great impediment to success, the lobster season here would be, to both trappers and packers, highly remunerative. Our trappers and others interested did petition the government this season for one month's extension, which would have placed them on the same level as the trappers of other countries.

There are six lobster factories under the jurisdiction of Mr. Wm. AuCoin, fishery overseer. Of those, three belong to Mr. H. L. Forhan, and are respectively situated at Grand Etang, Cap Rouge and L'Anse du Bois Marie. One belongs to Mr. Fulgence AuCoin and is situated at Cave-à-Loups. Another belongs to Mr. Geo. LeBrun and borders the shore at Castle Farm, and the sixth is owned by Peter Fiset, who operates at Cheticamp point. Mr. H. L. Forhan is a native of Raymond county, Maine, U.S.A.

4-5 EDWARD VII., A. 1905

Mr. Geo. LeBrun, whose factory, as I said before, is at the shore at Castle Farm, was awarded a silver medal and a diploma, for his excellent packing of lobster, in the year 1902, at the Halifax exhibition.

Turning now to the *herring* industry, I may say that herring struck the shore about May 1, when medium hauls were made in nets. But, owing to some inapparent cause, it remained on shore a very limited time. The following crafts comprised the Magdalen herring fleet, which cleared from this port early in May to secure cargoes of that fish, which strikes so abundantly around those isles:—*Gertie Belle*, *May Flower*, *Lucy*, *Mary Lambert*, and *O.L.B.* The fleet enjoyed a happy and prosperous voyage and was back to Cheticamp by the twelfth of that month, with respective hauls of 200, 260, 100, 130 and 100 barrels. It appeared to me—and it was quite discernible—that the quality of the Magdalen herring this year was inferior to that of last spring, being of smaller build, although not any thinner in appearance. The general observer might fail to notice such inferiority in the fish, but a keen scrutiny would at once detect the difference, when a cargo of it was being landed. I have also observed that such herring was given to much shrinkage under the influence of salt or brine—much more so than other qualities I have seen. The greater portion of this herring was salted dry in barrels and puncheons and rendered available for bait purposes. A slight portion of it was carted over on farms and used as fertilizer. As usual, and as I have already stated in some of my former reports, lobster-traps, baited with fresh cod-offal, invariably had a better figure than whenever baited with salted herring or any other salted fish. Naturally, lobsters seek fresh food and nothing else. I am sorry to report that the July herring strike was far from being profitable and was almost nothing this year. Nevertheless, the quality of what was captured was more than exceptional, as is always the case with such a particular variety of herring. The fall herring, which used to enter Cheticamp bay in the latter part of November, is now almost extinct. This was a short, thick and extraordinarily fat herring. The fishermen and local people were very fond of it and fairly supplied themselves with it for winter use. I may make the remark here, that not a year escapes without some peculiar change taking place in the natural instinct of some fishes at least, principally as to their habitual resorts and their manner of moving from one shore to another. Speaking of the staple fishes, cod, hake and haddock, it will be quite interesting to note that cod and hake principally have schooled much more inshore than last year, thus enabling the smaller crafts to figure in a more profitable season, and at a less degree of peril from the ocean. It is also an observable fact that during the late months of the fall, say November and December, cod draw so close to the shore that the fisher in his boat, at times, stands precisely at a hearing distance, and, while fishing, could well entertain his farmer friend diligently smoking his pipe on the headland. I must add also that considerable trawling has been operated this season, from which the very best quality of cod has been captured. This quality of cod, of course, has the best quality of livers, and these in turn produce the best quality of oil. It must be remembered that the fattest livers are always obtained from the fall cod and produce, not only the best quality, but also the greatest quantity of oil. The experiment has been made. The livers of a November cod will produce twice the oil than those of a May cod will, and an expert, at sight, would quickly detect the difference in quality. I must not fail to mention that a distillery for the purpose of converting cod-livers into oil was established here last year by a New Yorker, but, through circumstances which are hard to explain, the whole business failed entirely, and the plant was finally removed to Grand Greve, Gaspé, Quebec. I am of the opinion that a distillery here, conducted under a good management, should prove highly successful and be a good paying business. Cheticamp, with adjoining stations, could supply a large demand for livers and so should be able to furnish material for a good, capacious distillery. As usual, cod-fishing was somewhat retarded in July, owing to the great heat of the season affecting the clam supply. Clams generally get into such a condition as to be almost unfit for use, having too little firmness to hold on hooks whenever

SESSIONAL PAPER No. 22

subjected to the action of water. The refrigerators, at this juncture, could afford but little help, having received a very limited supply of herring bait. The few mackerel that were put in served for trawling purposes. Over 4,000 pounds of salmon have been placed in the Eastern Harbour freezer this season. In conclusion with the bait question, I will say that fishermen saw August without a squid on the shore. I am sure that such a late strike of that fish on this shore has seldom been recorded in the history of the Canadian fisheries. It was not before the 10th that the squid actually benefited the fishermen, although playing badly up to September 15. The influences of the weather, together with the arrival of dogfish in the earlier part of July, account, no doubt, for this vicious play of the squid. The dogfish struck this shore in greater abundance than ever and caused a wholesale destruction of herring and salmon-nets. They seemed at one time to have taken entire possession of the waters of the gulf, when the ocean was literally boiling with them. In the latter part of September, they were troublesome in the extreme, and not only terrorized and drove other fishes from their favourite haunts, but actually followed by schools in the wake of a sailing craft, only to surround her as soon as she had dropped her moorings. There and then would these hungry assailants, as it were, exhibit their frightful voracity, to the utter astonishment of the mortified crew. One thing has been worthy of notice this year respecting the dogfish: The larger kind kept close to shore, while the smaller kind kept off 5 or 6 miles. The dogfish does not deposit spawn, as other fishes, but hatches her own eggs and liberates her young one from their cozy bed as soon as actually developed in form.

I believe candidly the government would be acting upon a wise plan if its hatcheries would adopt and secure the development of a higher degree of maturity in their fishes before freeing them into unknown waters. I believe that better results would be obtained in the way of replenishing the lakes and rivers with a superior quality of stock fish were the above course pursued. The Margaree hatchery emptied a goodly portion of its stock fish in the pools of Little river, Cheticamp. Little river, as usual, offered its temptation in the way of poaching, and its banks were the scenes of many an adventurous little scheme which absolutely called for a strict vigilance on the part of the overseer and his staff of guardians. I have no account of the slightest disturbance whatever in that vicinity during the spawning season. Mr. A. C. Bertram, Inspector of Fisheries for Cape Breton, has caused a good commodious dwelling-house to be built within easy access to the pools and where a better 'surveillance' can be had by the resident overseer and guardians towards the protection of stock-salmon. I must further call attention to Cheticamp river or rather Plateau river, which is becoming largely accessible to smelts during the spawning season, the protection of which is deemed of the utmost importance. This river has had no protection yet, and on account of the wanton, useless destruction of spawn every year, the propagation of this species should be waning fast. I have strongly pictured the awful ravages entailed upon the smelt industry in some of my former reports, and I shall not henceforth refer to that subject or to the necessity of having the river under the services of a supervisor. Speaking about the mackerel industry, I may say that the waters of the gulf this season contained the greatest abundance of mackerel ever witnessed as yet. But the general catch has been very limited owing to the presence of dogfish on the grounds. Literally, mackerel were routed, as it were, from the shore, and had made an entire abandonment by the first of October. Although one of the greatest impediments to successful fishing of all kinds, the dogfish, looked upon with horror and disgust, bids fair to become, when largely introduced, one of the greatest and most remunerative industries in Canada. Foreign nations have already made a test of the dogfish, and pronounced it a favourite and substantial food fish, with very nourishing elements. On October 20, Mr. Geo. LeBrun packed a case of dogfish. I was in his kitchen on that day while he was preparing the fish, and he had some cooked on the table which he offered me. I was much surprised at the taste, and found it very excellent, and not in the least oily, as anticipated. The flesh was white and soft and very palatable. It must be

borne in mind that the flesh of the dogfish contains no oil whatever, as none can be found or even tasted whenever cooked. Hence, the oil must be attributed to the skin. I shall now proceed towards the description of a 'plaice,' of which structure and general appearance, upon close examination, I have been highly amused and interested. First, the flesh of the plaice cannot be praised too much. It is far better than cod, being more juicy and savoury. It is a peculiar fish, resembling halibut in form and shape, and has a white and a dark side. Seagoing people still entertain erroneous ideas about the plaice, and mistake the belly for one of its sides. Not because it moves and swims on its white side, that its dark side must necessarily be called its back. The greatest peculiarity of the fish is the location of its eyes. Contrary to other fishes, it has both eyes on the same side of the head—on the dark side, I will not say the back. The eyes are very close to each other, and very near the point of the mouth. The tail is in a horizontal line with the back and belly, tending to confirm the idea that both sides, dark and white, are neither back nor belly. On July 16, I secured a monster plaice which had been captured in deep water on cod grounds, and brought it home. Upon cleaning it, I found in the large intestines a goodly quantity of sand and small gravel, from the size of a pea to that of a pin's head, also bits of shell, &c. It was also clear to me that the dorsal, pectoral, ventral and anal fins of the plaice exactly corresponded with my description of the fish. Another variety of plaice keep about the heads of wharfs, and feed upon the offal thrown from them. There are many kinds of other fishes, small in structure, which are held by some people with disdain; but they are all edible, and the flesh of some when prepared by the adept 'cuisinier,' would honour a prince's table. Even the yellow-spotted 'plagueil,' if led to the frying-pan, would surprise the fastidious epicure.

I shall now give in tabulated form the statistical figures which I have gathered from the various fishmongers at the above-named stations :—

Cheticamp Proper.

Cod	lbs.	960,000	Herring.. .. .	brls.	800
Hake.. .. .	"	18,000	Mackerel.. .. .	"	4
Haddock.. .. .	"	42,000	Lobsters.. .. .	cases.	773
Pollock.. .. .	"	13,000	Cod-oil.. .. .	gals.	855
Salmon.. .. .	"	9,500			

Cheticamp Island.

Cod.. .. .	lbs.	75,000	Cod-oil.. .. .	gals.	45
Hake.. .. .	"	7,500	Lobster.. .. .	cases.	128
Haddock.. .. .	"	12,000			

Grand Etang.

Cod.. .. .	lbs.	388,000	Mackerel.. .. .	brls.	7
Hake.. .. .	"	8,200	Lobster.. .. .	cases.	450
Haddock.. .. .	"	40,600	Cod-oil.. .. .	gals.	900
Pollock.. .. .	"	6,400	Dogfish oil.. .. .	"	500
Herring	brls.	100			

Cap-Rouge.

Cod.. .. .	lbs.	15,000	Mackerel	brls.	10
Haddock.. .. .	"	5,000	Lobster.. .. .	cases.	311

Pleasant Bay.

Cod.. .. .	lbs.	20,000	Cod oil.. .. .	gals.	50
Mackerel.. .. .	brls.	80	Lobster	cases.	240

CHETICAMP PROPER.

I have issued twenty-three fishing bounty licenses in the spring. For want of a substantial crew the schooner *Mizpah* had to remain ashore, and was not floated this season. The schooner *Wyvern*, which left this port early in November laden with farm produce and bound for Glace Bay, C.B., met with violent squalls of wind and

SESSIONAL PAPER No. 22

snowstorm. From want of skilful manœuvre, the vessel when off Cape North became unmanageable, and was left to run adrift in a haphazard way till off Cheticamp point, when a glimpse of the light was seen. A turn of the wheel brought the vessel leeward, and she passed over the 'Haut Fond' near the rocky shore of the southern end of Cheticamp island, and stranded on the beach at 'L'Etang de Ferne,' where she now lies a total wreck.

In conclusion, I shall say that the fishery regulations in general were well observed. In the beginning of the season it was evident that a slight negligence as to the hoisting of flags in the case of registered boats would eventually grow; the watchful observer in this case had only to remind such masters involved of their duty and the violation was never repeated.

INGONISH, C.B.

Reported, Mr. Sidney S. Burke.

Cod, haddock and pollock were and are scarce up to the present time (November 10), but were never so high in value. The fishermen of Middle-head, Ingonish, purchased a trap and had it set at the above-named locality on June 13. On August 1 this trap landed 600 quintals of pollock, but the fishermen would not risk leaving it out any longer for fear of having it destroyed by the dogfish. The first cod taken was reported on May 22, in light quantities.

Herring struck this coast about May 1, and continued very plentiful for two weeks, thereby enabling lobster-fishermen to procure a sufficient quantity for bait for their summer's work. The large fat herring that used to frequent this coast fifteen and twenty years ago are now not available. It is hard to assign a reason for this.

Lobsters.—Light scattering ice on the coast from April 25 to May 10 prevented fishing on the outside coast, and on May 13 drift ice was noticed two miles off-shore. Few lobsters were caught in bays in May from the 3rd to the 10th, and it was not until the latter date did the fishermen get squarely under way to operate this fishery. Good lobstering was reported in May on the 13th, and fair during the remainder of the month. It is estimated that the factories on the shores made a fairly good season's work.

Mackerel.—First reported on June 1, and during the following ten days were very plentiful. Large hauls were taken, most of which were salted and shipped about August 1 to the Halifax market, where the fishermen were receiving for mackerel from \$7 to \$8 per barrel. Summer mackerel were schooling along our coast in great quantities the past season, but fishermen could not keep out their nets owing to the presence of the pests, dogfish, which were very numerous on our shores, destroying gear of all kinds. Unless something is done to exterminate this class of fish, so detrimental to our cod, herring and mackerel fisheries, it looks as if our important industry would become a thing of the past.

Salmon.—Signs of salmon were noticed on June 10, but from this date to the 15th, a few days later, none were taken. Salmon continued very scarce and uncertain to the end of the season. Most all of the salmon taken at this station this season were bought fresh by local buyers and sent to the Sydneys.

Squid appeared on the coast about July 18 in small quantities, and continued scarce and uncertain until the middle of September. From this time to the end of the fishing season the fishermen rarely were without bait to fish with.

The lobster and mackerel fishery proved a success, but cod, haddock and other branches of this industry were almost a failure as far as quantity was concerned, but as before stated all kinds of fish were at par value.

L'ARDOISE, C.B.

Reporter, Mr. J. M. Mc Isaac :

Codfish were taken this season about June 1, for the first, and on the 19th it was reported that both cod and haddock could be had when bait was obtainable. Many small crafts about this time were making preparations for the eastern ground fisheries and the catches to date were about the same as the corresponding period of the previous year. The last week in June the wind was blowing hard from the north-west, and reports received were poor, although fair signs of cod on the coast were noticed. On July 1, it was reported that cod were more plentiful this season than last when bait could be procured, and all small vessels from the eastern grounds brought fair hauls. Cod also struck in plentifully off Lingan and Port Morien during June. In July good signs on the grounds were reported when bait was going, and on the 15th all the small boats out of this port were off to the eastern grounds on a second trip, with the weather very favourable for the prosecution of the fisheries. Fair fishing was reported on the 21st, and as the weather was continuing very fine haymaking was the principal pursuit at this station to the end of August; although a few boats were engaged in line fishing. Several small hauls of cod were taken during the month of August by the few boats that followed up this fishing, and on the 21st, it was reported the line fishery was not quite up to the average. Many of the fishermen who were not haymaking were employed at the breakwater. The fishermen were reported on September 9 busily engaged in preparing their catches for shipment, as prices early in the fall were very favourable. Several buyers from various parts of the province were engaged securing all the catches along the shore, and the good prices received this season, although fish has not been very plenty, will place the fishermen in a fair position for the coming winter. Very little was done in this fishery for the balance of the season. The following is the catch of the small vessels, as reported :—

Name.	Tonnage.	No. of Quintals.
<i>Florence M.</i>	24	150
<i>Annie B.</i>	18	100
<i>Mary S.</i>	18	120
<i>Mary M.</i>	21	150
<i>Two Brothers.</i>	18	130
<i>Mary Alice.</i>	10	100
<i>St. Lidwina.</i>	11	90
		<hr/> 840

Haddock.—First signs of haddock on the coast were reported May 24, and a few fish were taken later in the month. Fair haddock fishing was reported for a couple of days in June about the 10th, and light quantities were taken to the 29th. Haddock were reported scarce during the summer months, and very few boats prosecuted this fishery as vessels generally go east about this time, excepting a few craft that make this station their headquarters.

Herring were very scarce early in the season and on May 13, it was reported that there was such a scarcity of bait at this station, fresh herring were being brought in carts from Bras d'Or lake a distance of six miles to meet local demands. A few fat herring were reported in June 8 and a very small quantity of small fish was on the shores about the 23rd of the month. Herring were very scarce on July 20, when a fair stop was made. No catches of any importance were reported during the remainder of the season. The herring fishery has been reported a total failure this season ; not enough taken for local use.

SESSIONAL PAPER No. 22

Lobsters were the first fish taken at this station and were reported for the first on May 18, when a few were caught. A small number of traps that were set earlier in the month were seriously damaged by ice that was still in floes around the coast. Fair catches of small sized lobsters became scarce to the close of the fishing season, which was reported not up to the average. Good prices were obtained by those engaged in this industry the past season. The number of lobster fishermen this season was not as large as in former years.

Mackerel of a good quality and large in size were caught for the first on May 25, and a fair week's mackerel fishing was reported June 3. Had the weather been more favourable larger catches would have been taken, as the nets were well filled, when boats went out to attend them, but stormy weather setting in caused the crafts to return to the shore. After a gale of 24 hours duration the weather cleared and permitted the boats to make a second attempt when a fair average quantity was obtained. The mackerel run was about over June 10 and the catch was considered by the mackerel fishermen as being not quite as good as last season's. All hands however, appeared to have been satisfied with the results as the mackerel taken were large and fat and saved in good order, the merchants having on hand a good supply of salt. About 4,000 barrels, or 1,000 barrels less than last year's catch was reported as the total quantity taken.

Dogfish were reported on the coast during the summer months, but were not so troublesome as in former seasons.

MAIN À DIEU, C.B.

Reporter, Mr. George W. Dickson.

Cod.—This station was established on July 2, and the first report of the codfishery, received on the 21st of the same month, indicated fair fishing with light hauls after to August 20, 23 and 27, on which dates cod were taken in fair quantities. Dogfish being very plentiful the latter part of July, were regarded as a 'plague,' and reported a great hindrance to net and line fishing. The month of September was reported an average one, but dogfish were close in-shore and very troublesome. Fishing was reported on October 7 fairly good, with from two to five quintals of fish being taken, but the scarcity of bait was causing much concern among the fishermen, which was attributable to dogfish, which prevented the fishermen from catching squid. Boats that were successful in catching a few of this little bait fish and reached the off-shore fishing grounds did fairly well.

Herring were reported very scarce during the months of July and August, and on September 2 it was reported that bait had been very scarce, only a small quantity being taken; the boats not stopping sufficient for a half day's fishing during the whole week. It was reported that the July herring were never known to be so scarce by the oldest inhabitants as they were the past season. A few stops were made occasionally to the end of the season.

Lobsters.—This station was only established a few weeks prior to the closing of the lobster season, and as far as could be ascertained the fishing was fair to the closing of the lobster factories. The majority of the fishermen at this station attended the lobster fishing principally owing to the good weather prevailing and fairly good prices (\$3 per cwt.) were realized for their catch. Some years previous, during unfavourable weather, the lobster fishermen would only land about one-half their traps, but this season nearly all lobster traps were brought ashore in good order. After the closing of the season for lobsters the fishermen who engaged in this industry prosecuted the cod-

4-5 EDWARD VII., A. 1905

fishery in larger boats. The fishing the past season has been occasionally light owing to a scarcity of bait caused by the large numbers of dogfish in-shore.

Mackerel in small quantities were reported the latter part of July and were schooling on August 11, when a few were netted. A sufficient quantity of mackerel were caught and used for bait on August 17, by hooks and nets and a few fair catches were taken toward the end of the month. Light quantities of very large mackerel were on the coast in September, but they would neither hook nor net. Mackerel were taken to the close of the season in small catches which were of great assistance to the fishermen in supplying them with fresh bait.

Pollock were first reported when in schools off this coast on July 21. Several light fares of pollock were taken in August and September; on October 13, pollock were reported plentiful with boats averaging 6 to 8 quintals per boat of two men.

Squid were on the coast in light quantities during the season which is accounted for by the swarms of dogfish on the shores which prevented squid from being 'jigged'.

Dogfish.—Exceedingly large quantities of this fish were going this season and at times almost suspended the fishing industry. Mr. Dickson reporting on dogfish, says,—‘If the government intends erecting a reduction plant for the destruction of dogfish on the southern coast of Cape Breton, I would suggest Main-à-Dieu, as a suitable site for such, as dogfish during this fishing season, are on the shores of this station and adjacent waters in inexhaustible supply’.

This station has been reported as the centre of quite an important fishing section. There is a lobster factory here that packs on an average of 1,000 cases and should favourable weather continue this season will pack considerably more. This station alone has about four small vessels, 12 large boats and about 20 to 25 small ones engaged in the fishing industry each season. Including the island of Scatterie the nearest point of which is about one and one half miles distant it is a favourite fishing ground for many fishermen of this neighbourhood. Many permanent residents are located there also a weekly mail service from this station to the island, whose only occupation is fishing as well as the south side of Mira bay, where some of our lobster-fishermen prosecute that industry. Including this station, Scatterie island and the south side of Mira bay, there are approximately 4 small vessels, 20 or 22 large boats and 40 or 50 smaller ones. The two small villages of Bauline and Little Lorraine about three and four miles from here belong to this electoral district and would have about 25 large and small boats engaged in the fisheries in that section. The Government Telegraph Office was opened at this station the past spring and cable connection to Scatterie installed where the offices are now being established.

PETIT DE GRAT, C.B.

Reporter, Mr. P. T. Fougere :

Alewives.—None or very few alewives were caught at this station the past season.

Codfish came on the coast in May in such light quantities that the fishermen were reported very much discouraged, which scarcity continued to June 23 and 24, on which days the fishing slightly improved. The sch. *New Home*, from the fishing grounds on the 6th, reported cod scarce. After a five weeks' trip to the banks, her catch only amounted to 7,000 pounds. Three arrivals on the 18th, the *Lillian Louise*, *Lady Laurier* and *Lena Jane*, also reported the off-shore cod-fishery dull. Poor fishing was reported on July 2 on account of scarcity of bait, which prevented the fishermen from going to the grounds. The schooners *Lady Laurier*, *Lillian Louise*, *Lena*

SESSIONAL PAPER No. 22

June and Florence M., and a few other craft were in port seeking bait but could not procure sufficient for a two day's trip to the grounds. The fishermen reported dogfish very plentiful and destructive when they were operating there. Fair quantities of codfish were on the coast the 7th, 19th and 23rd, but no bait could be had. The fishery was still dull to August 13, when the schooners *Primrose*, *Minnie L.* and *Lizzie May* were forced to leave the banks on account of heavy tides and strong winds. The following week the fleet of small bankers left port for Souris, P.E.I., and Port Hood, C.B. The *Pearl* and *Lady Laurier* from the Gulf of St. Lawrence fishing grounds, were unable to obtain catches of any kind, as dogfish were in possession of the grounds. There were fair appearances of codfish in September on the 3rd and 9th, but dogfish were still troublesome and bait scarce. Several small catches were taken to the close of the season. About 2,000 quintals of dry fish were taken this season. The firm of J. & W. Jean, carrying on business at this station, sold or exported about 300 quintals, and are at present purchasing fresh fish. Another company, lately established, A. & R. Loggie, has built a pier at this port and will engage in the dry and fresh fish trade. There are fifteen vessels or large boats hailing from this port, besides other vessels from neighbouring ports that are engaged at present in the fresh fish business and vigorously prosecute the fisheries. \$1.30 per cwt., was the price paid in December for fresh fish.

Haddock.—Light quantities of haddock were taken in May, excepting the 18th and 26th, on which dates fair fishing was reported. The catches were reported light again during the month of June and several fair hauls were made by shore boats on July 7, 19 and 23. Haddock fishing the remainder of the season was light. The canneries of Henry Duff, put up this season quite a quantity of canned haddies which brought ready sale in the upper provinces. Two thousand three hundred and fifty-six boxes of smoked finnan haddies have been shipped by this firm, which is also a buyer of fresh fish. About 700 quintals of haddock were shipped from this port by the firm of J. & W. Jean. It is estimated that 2,000 quintals of haddock were taken this season.

Lobsters.—Ice was still on the coast early in the fishing season, and lobstering when reported on May 7, was in a fairly good condition, with fair fishing when the weather permitted, to the end of the month. For the remainder of the season the catches of lobsters were light, excepting June 7, 10 and 16, when fair reports were received. There were not as many lobsters caught this season as the previous years, but the good prices received for them more than made up for the deficiency in the catch. Six hundred cases of lobsters were canned by the H. E. Duff's canneries, and 700 cases was the output from the cannery of Baxter Bros., under the management of Freeman Mills.

Herring.—This finny tribe made their appearance early in May, but very few were caught, and the catches to the end of June were very light. The fishery in July was somewhat better and towards the latter part of the month fair stops were made. Herring fair was reported in August on the 1st and 2nd, and good quantities of bait were obtainable on the 6th, on which date two American bankers under license baited and left for the banks. Herrings were reported to September 10 in very light fares, when the fishery became very dull to the end of the season. It was reported in the months June, July, August and September that herring struck in plentifully in previous years, but have been very poor this season, and the total catch will not average more than 300 barrels. Many of the herring taken this season were troubled with a malady best known to the members of the 'finny tribe' as 'soft back,' and the herring fishermen all through the fishing season have done very little.

Mackerel.—Very few mackerel were seen in the waters of our bay this season. They apparently have taken another course and no reason whatever can be assigned for them leaving our shores.

4-5 EDWARD VII.. A. 1905

Salmon although salmon were reported fair in June from the 10th to 21st, this delicious and rare fish has been the poorest in these waters for years as informed by fishermen of many years experience. The method of curing this fish is not yet perfected and should any one desire to engage in the fresh fish business there is plenty of room for them at this station, where they would merit a share of the patronage of the port.

Squid were first reported when fair quantities were going in on September 7, and in small catches the 9th. Boats were averaging 15 and 20 squids by report of September 17. Very few were taken to October 15 when fishermen were reported trying for squid, but owing to the heavy seas running from the eastward only a small quantity was taken.

Dogfish came on the coast earlier this season than last and in very large quantities. During the season, they were very troublesome and destructive to the fishermen and seriously retarded fishing operations, causing large losses to the fishermen by driving all kinds of fish from the various fishing grounds. Dogfish were reported on September 3 very close in-shore and even in the harbour. The cannery of H. E. Duff, has put up a few cases of dogfish and shipped some foreign to ascertain whether a market can be found for them. Should the shipment prove successful, this would greatly assist in helping to rid the waters of this very troublesome and destructive kind of fish.

ST. ANN'S (ENGLISHTOWN), C.B.

Reporter, Mr. Thomas D. Morrison.

Codfish were first caught about May 25 ; the catch throughout the season being light.

Haddock were first reported May 27, in good quantities, and were very abundant on the 30th. Haddock were again reported plentiful on the coast on June 1, but not many were reported as having been taken.

Herring struck in at this station early in April ; but not very many were taken until the second week in May, owing to ice being on the coast. About May 11, nets and one fish trap here took large quantities ; the trap reporting 100 barrels, which were supplied to bankers from St. Pierre, Newfoundland, Lunenburg, and one or two American vessels, as well as supplying the lobster-factories. Eight vessels were reported as having baited on the 11th. It was reported that herring were never known to be so plentiful when they were on the coast as they were during the past season.

Lobsters were first taken about May 12 in fair numbers and were reported very plentiful during the most of the season, but small in size. There was no damage to lobster-traps this year, the weather being more favourable than for many seasons past. About 1,200 cases, or 400 cases more of lobsters were packed during this season than that of 1903.

Salmon.—Fair catches of salmon were reported in June and July, and the run of salmon was thought to have been a little better than last season's.

Mackerel.—No spring mackerel and very few summer fish were taken at this station the past season.

Pollock were reported very scarce this season.

Dogfish appeared on the coast as usual and very early in the season.

Squid.—There was no squid reported as being caught this season.

On the whole fish were never known to be so scarce, at this station as they were during the summer months.

SESSIONAL PAPER No. 22

P. E. ISLAND.

ALBERTON, P.E.I.

Reporter, Mr. David Montgomery.

Codfish appeared on the coast very early in the season and the catches were heavy from the middle of May throughout the whole season. The fish were of a very large size and proved very remunerative to those who prosecuted this branch of fisheries; everyone having made large catches over the whole district.

Haddock were very scarce this season; the catches taken being very small.

Herring were first taken at this station on April 20, and from that date until June 1, herring were very plenty all over this district, more especially at Kildare, North Cape, and also Kildare trap. The catch taken was more than sufficient to supply the local requirements for cod and lobster bait. About August 1, the summer shoal struck in and large catches of superior herring were obtained. In September, the herring fishery was reported very good on the 1st, and fair at intervals from the 5th to the 24th. Very good herring fishing was also reported in the same month, daily, from the 26th to the 30th, inclusive. The quality of the summer run of herring was the best taken at this station for many years.

Lobsters.—This was the best season for this fishery for a number of years back. The fishing began with good results the latter part of April and continued good up to June 10. Lobster operations were greatly delayed for four days later by the traps being badly damaged by a storm which prevailed on the 14th. To the 27th, of the month the fishing was light with fair catches on the 28th, 29th and 30th. For the remainder of the season, when the weather permitted, a few smaller fares were reported. The lobsters taken this season were of much larger size than those caught formerly and the lobster fishermen over the entire district reported a good season's work.

Mackerel fishing the past season was a very poor one. The fish appeared on the coast the last ten days of the month of June and the first part of July, gradually disappearing from the shores after this to the end of the fishing season. The mackerel caught were of a fine quality for that season of the year. All the catches of mackerel this season were by netting; none were taken by the hook.

Trout fishing in this district was a failure this season. Only a few good fares early in the season were reported.

Dogfish were reported on the grounds on September 17 and 19 very troublesome to the codfishermen.

BLOOMFIELD OR MIMINEGASHI, P.E.I.

Reporter, Mr. Edmund D. Kelly.

Codfishing did not commence at this station this season until about May 21, and then with poor prospects. It was reported on May 2 that some of the fishermen who had their traps set on Saturday, April 30, had them badly wrecked by a storm which prevailed during the evening of that day. Bodies of ice were also noticed on the northern shore, as well as a few fragmentary portions that skimmed along various parts of the coast. The codfishery was fair from May 27 to June 4, and the fish appeared fairly plenty to June 27, but bait being scarce, the boats averaged from 50 to 200 pounds. Good hauls were taken in July from the 4th to 10th, and fair after, with an occasional scarcity, to August 15. A scarcity of codfish followed after until the report of September 3 read:—'Cod and hake are fairly plenty, but bait very

4-5 EDWARD VII., A. 1905

scarce and weather blowy; very little fishing will be done.' Codfish remained on the coast fair to the close of the season. About 300 quintals were reported as the total catch for this season for Miminegash.

Hake fishing commenced about June 27, with poor catches to the latter part of July, when fair quantities were on the coast, and the boat fishermen reported from two to three quintals. Fair fishing was reported in August from the 4th to 11th, and in September, at intervals, from the 8th to 30th. During the latter period it was reported that the weather was so stormy that it was seldom boats could reach the grounds—consequently the fares were small. Thirty-one quintals of hake were taken the past season.

Herring struck in along the coast about May 3, in light quantities and remained so until the 13th, when they appeared in very much larger quantities and some good catches were taken. The early run of herring was very slack after the first week in June. The fall herring made its appearance about August 23, with poor fishing to September 2, which improved to good and remained such to the middle of the month. Some good catches of fall fish were made during the time herring were on the shores. The total catch of herring will be about 450 barrels. It was reported that on many occasions when herring were plenty, the fishermen did not catch any quantity, as salt was very scarce, and as a consequence a larger number of barrels was not put up.

Lobster.—The lobster season began about May 6, with very small catches, and on the 14th, it was reported that the lobster fishermen were doing fairly well in that branch, which continued fair to the 27th. The lobster industry was poor after to July 10. During the lobster season some boats average 100 to 400 lbs. The lobster catch at this station is reported at 425 cases.

Mackerel were reported on the coast about June 16, when a very few were caught. They were not in any large quantity and the highest catch on the 24th, was reported at 18 mackerel per net. The largest fares of mackerel taken were reported in July 13 and 14, when the fishing was fair with nets reporting from 200 to 300 and 400 fish. 70 barrels will represent the total catch for the past season.

The following is a statement of the quantity of fish caught at Campbellton, P.E.I., during the past season :—

Cod and hake.. . . .	80 Quintals.
Spring herring.. . . .	100 Barrels.
Fall herring.. . . .	70 Barrels.
Mackerel.. . . .	15 Barrels.
Lobsters.. . . .	100 Cases.

GEORGETOWN, P.E.I.

Reporter, Mr. Charles Owen :

Codfish made their appearance about May 1 and hand lining near shore up to the end of June was reported from good to fair. The fish then moved off into deep water or to the various banks when on July 9, cod were said to have been in good quantities south-east off Souris. The latter part of July, off Murray harbour and Souris good catches of cod were taken. It was reported by the master of the schooner *Arabia* of Lunenburg, in port on August 1 that the codfishery was good off Point Miscou and Bank Orphan, with good hauls being taken of the north side of this island and on the banks in the south eastern part of the gulf. Between East point and St. Peter's bay the middle of August cod were in good numbers and many good fares were taken. There was a scarcity of fish reported August 29, at this station but off

SESSIONAL PAPER No. 22

Miscou fairly large quantities of cod were seen. Dogfish had become so numerous about this date that vessels engaged operating there were obliged to leave the grounds. On September 3 it was said that codfish were plentiful on the banks off Souris and towards Cape George, with good fishing reported on the banks to late in the season.

Hake.—Good fares of hake were reported to have been taken off Souris and Murray harbour on July 25 and large quantities on the first of August were reported at fisherman's bank. On August 15 and 29 good hake fishing was reported between Souris and Cape George. The fall fishing both for cod and hake has been good ; the fish being plentiful on the banks to the end of November.

Herring were first taken this season about April 20, fair, and the catch continued the same to the 28th, afterwards becoming scarce in shore to May 6. To May 9, herring had not been very plentiful on the coast, occasionally one barrel per net had been taken. Herring were fair off Cape Sharpe and Broughton island on May 16 with from fair to good fishing being reported off Panmure island to the 30th of month. During June the herring fishery was poor but in July large schools of small herring were said to be numerous on the banks. Fair catches of herring were taken in August off Pictou and Wood islands until dogfish made their appearance and becoming very destructive to the nets and the fish meshed the fishermen were compelled to discontinue setting their gear and returned home. The herring catch prior to the striking in of dogfish in this vicinity has been fair; medium-sized fat herring being plentiful in the bays and rivers.

Lobster fishing commenced about April 25, and from thence to May 25, the catch was reported a good one. After this date there was a decline in the catch to the end of the month, which was attributed to prevailing storms and unfavourable weather for fishing. Fair lobstering was reported the first of June with small catches after when an improvement was noticed by some of the lobster fishermen about the 20th of the month, but it was only of a short duration, and the fishery gradually declined in catches to the close of the season.

Mackerel were first reported having made their appearance when they struck in off Pictou island on June 20. Off East point on July 18, netters reported a good catch and the next day mackerel were schooling off Panmure island. In the vicinity of Cape Sharp on August 1, a few mackerel were netted, with an occasional catch being netted throughout the remainder of the season.

Squid were reported for the first when driven on shore in large quantities on September 3, and were said to have been one foot in depth for a mile along the shore. At St. Mary's and Sturgeon bay on September 8, it was reported quantities of squid had been carted off the shores by farmers to be utilized for compost purposes.

Dogfish first appeared on the coast this season off East point on July 15, and were very destructive to nets set for herring as well as to fish and trawls. In August dogfish were on the coast in such large numbers that the fishermen were obliged to relinquish their claim to the fishing grounds. Similar reports concerning the ravages of this fish were received in September, which seriously retarded the progress of the fishermen when fish were reported plentiful on the shores.

Bait.—Herring bait by fishermen's nets was reported at this station in May and June, and at Pictou and Panmure islands in August from the 18th to 23rd.

Ice was in good supply throughout the season.

MALPEQUE, P. E. I.

Reporter, Mr. Hume Hopgood.

Cod fish were first reported when taken on trawls on May 14, and handlining began about a week later when fair quantities of cod were taken on the 21st, 27th and 30th,

4-5 EDWARD VII., A. 1905

with good hauls being taken on the 31st. The fishing during the months of June, July and August was reported fairly good, but on account of the large quantities of dogfish on the coast in September the catch was not as large as it would otherwise have been. The season's catch has been considered better than it has been for the past three or four years.

Herring struck in on May 2 and 3, with light catches being taken after this to the 9th, when some very good stops were made as far as reported. Herring were said to have been plentiful this season; a sufficient quantity being procured for bait purposes and local demands. A great many more could have been obtained had the demand required it.

Lobsters were first taken about May 4, and the catches were fairly good from the date until about June 26. Owing to a storm which occurred on June 15 which badly damaged considerable lobster gear, the catch was not large for the balance of the season. The total catch was about the same as last year.

Mackerel.—None were caught by handlines this season. A few barrels were taken in nets on July 1, wide off shore.

NEW BRUNSWICK.

GRAND MANAN, N.B.

Reporter, Mr. Charles Dixon.

Cod.—Very good codfishing was reported May 7, on the Gravelly Bottom and Bulkhead and vessels operating reported from three to seven quintals of large cod daily. Easterly winds prevented the craft from going to the fishing grounds the following week, but three vessels which anchored on Gravelly Bottom the 14th, reported each five quintals. Very poor fishing was reported May 28, owing to bad weather. A few boats that fished during the week on Gravelly Bottom caught from four to six quintals per day. The codfishery at Bulkhead and on Gravelly Bottom was very good in June, and on the 25th, small vessels reported averaging forty quintals. To July 2, fishing was dull as the weather was very bad all the week and bait very scarce compelling vessels to seek herring for bait at St. Andrew's, N.B., and Digby, N.S. During the month of July the catches of cod were very light as bait continued scarce and as dogfish had taken charge of the fishing grounds the latter part of July, the prospects for good fishing were not very encouraging. Cod scarce August 2, was the last report received of this fishery. Total season's catch is estimated at 1,000 quintals, or the same as the preceding year. One hundred and fifty casks, or 7,500 gallons of cod oil were also obtained during the season.

Hake and Haddock.—On May 28, it was reported that several vessels trawling off Swallowtail and in the North channel obtained about four or five quintals of hake and haddock each day in the same locality, on June 4 catches varying from ten to fifteen quintals per day were taken. Haddock were not so plentiful June 11, but good hake fishing still continued, and on the 18th hake were taken in good quantities north-east of Swallowtail light. For the remainder of the month, vessels operating off the light caught as high as twenty-five quintals per day with the small boats doing well hakeing in the North channel. In July the smaller vessels reported good catches off the light, North channel, and in Long Island bay. From four to ten quintals per day were taken by the small boats and the larger crafts reporting a daily catch of twenty-five quintals. To August 18, good catches of hake and fair of haddock were reported taken in the North channel and off Swallowtail light. The total catch of 5,500 quintal of hake shows an increase of 3,000 quintals as compared with 1903.

SESSIONAL PAPER No. 22

The total quantity of haddock taken was the same as in 1903, 1,000 quintals. About 6,000 pounds of hake sounds have been cured and dried, for market purposes, which brought only 15 cents per pound.

Lobster fishing was reported on May 14 fair, at the south end of the island, and at Southhead the 28th, very good catches of large lobster were taken. Fair lobstering was reported in the North channel June 21, 22 and 23. Lobster smacks from the United States were reported in May securing all the catches. Seventy-five thousand live lobsters were shipped in smacks to the United States. The fishermen this season reported the lobster catch a fair average one. The majority of the Northhead fishermen seek employment in the factories at Lubec and Eastport, Maine, and as a result there was not a large number of our people home the best part of the fishing season.

Herring were reported on May 28 used as bait for the weirs at Campobello island. The first herrings at the island were reported the week of June 4, when large quantities of large herring struck in on the soundings two miles off Gannet Rock and some of the fishermen netted as high as forty barrels per vessel. Good prospects for herring fishing on the soundings was reported the following week and one boat took one barrel of large fish on the 11th. The tides were reported coming in the next week and small sized herring were working in-shore. Later in the month at Long island, the weirs were taking small herring in large numbers and on the morning of June 18, seventeen hogshead of herring were caught with bait in good supply. The cable between the mainland and island, which had been interrupted since the beginning of the fishing season, was reported repaired on June 18, and daily messages of the fisheries of the island were forwarded quite regularly. On July 1 five hundred herring of a very large size were taken in nets set on the north side of the island. Herring were very scarce all around the island on July 9, and small crafts were using salt fish for bait. Large net herrings were taken on the soundings July 16, and several vessels made catches as high as thirty barrels. Good netting of large fish were also reported at Southhead the same day. Some small herring were caught in weirs at Seal cove two nights of the week of July 23 and were disposed of to American vessels for sardine purposes at \$15 per hogshead. One vessel caught at Southhead on July 30 150 barrels of large net herring. A few were also taken on the soundings July 28 and 29. The fishermen were reported netting some herring at Southhead and on the north side of the island on August 6, and one weir at Seal cove caught \$600 worth of sardine herring one evening of the same week. Nothing has been reported since. There have not been many kippered herring packed here this season, only about 1,000 boxes dry. Very few herring were canned and about 3,000 barrels of weir herring were shipped in American bottoms to the United States in bulk for canning and smoking purposes. The weir fishermen at Seal cove have done nothing this season, while Grand Harbour has reported extra good fish in the weirs. Frank Ingersoll at Long island put up during the past season 100,000 boxes of herring.

Pollock were reported on the rips May 7, and the seiners were quite prepared for this fishery. One boat seined about 1,200 pollock on June 4, and the 11th, a few were taken on the Bulk-Head. Pollock were plentiful on June 18 on Gravelly Bottom with vessels averaging forty quintals of mixed fish (cod and pollock), on the 25th. Pollock fishing in July was dull to the 23rd, when good quantities struck in. A few pollock were taken the first week in August.

Dogfish were reported plentiful on July 22 and in full possession of the grounds on July 30. Dogfish were not on the coast in such large numbers during the month of August.

About thirty tons of dulse were obtained during the season and shipped to St. John, N.B., and the American market, where it brought 5 cents per pound.

4-5 EDWARD VII., A. 1905

CARAQUET, N.B.

Reporter, Mrs. E. Blanchard :

Codfish.—The first report received at the Bureau from this station reported the ice on the coast moving slowly off, but no fishing was done. The codfishery opened with light catch on May 26 and 28 but in June the fishing improved and to the 21st, cod were taken at intervals from very good to fair. Towards the end of the season the codfishing was carried on with satisfactory results. Dogfish were very abundant and troublesome this season and the catches taken were considered a little less than last year.

Herring were reported abundant during the month of May and the first catch of herring taken at this station was about the end of April. The harbour was clear of ice very late this season. Fall herring fishing was dull in this locality but the catches in general have been considered very fair for the season.

Lobster fishing has been considered fair during the past season ; the catch being a shade better than last year.

Salmon fishing was almost 'nil' in this vicinity the past season, and the mackerel fishery was also very poor.

Clams which were plentiful all the past season kept the bankers in good supply during fishing operations.

SHIPPIGAN.

Reporter, Mrs. Martin J. Robichaud.

Codfish appeared on the coast about the end of May in large quantities and continued the same until the latter part of June, when the catches slackened to August 15, owing to the scarcity of bait and the ravages of the dogfish. Some very good fishing has been reported during the month of September; craft with crews of four men operating off-shore returned with seventy quintals of fish. Although the fishery cannot be called good this year, the total catch is estimated at 12,500 quintals of cod and haddock.

Herring appeared at the end of April in large quantities and were the same up to May 25. A report received at the bureau from this station on May 3, stated that the harbour was not yet clear of ice and very little fishing had been done along the coast. Herring were the only fish going at this time and about 50 barrels were stopped in two days fishing. Light catches were taken in June and July, and in August on the 29th, herring were reported very plenty, with good fishing the following day. Several good fares of herring were taken the first week in September. During the past season about 500 barrels of herring were packed for market; 15,000 salted in bulk as bait for lobster; 10,000 barrels used as fertilizer; and 2,000 barrels were stored in the freezer to be exported in January. The fall run of herring has not been quite as good as last season's and about 1,000 barrels were taken during that period.

Lobsters appeared on our coast at the beginning of May, and the fishing was reported good the whole season round. There were about thirty factories in operation along the Shippigan and Miscou islands the past season and the total pack was the best ever seen in this locality for a good many years. It is estimated that 12,000 cases were packed the past season. A lobster hatchery was erected at this station last winter, and has been in operation from June 15, to July 15. It has been calculated that 3,000,000 lobsters were hatched and distributed along the coast.

SESSIONAL PAPER No. 22

Mackerel have almost disappeared from our coast. The total catch this year only amounted to 6,000 mackerel, which were removed to the freezers to be shipped in January.

Salmon.—Good salmon fishing was reported in May and June, but slackened off in July. The fishery has been very good, during the past season about 2,500 salmon were taken, part of which has been shipped in ice to the United States, the remainder being stored in freezers to be exported by rail at the beginning of the cold season.

Smelts were fished by gill nets and hooks, but seem to be scarce as reported to October 20.

Clams have been plentiful this season. About 4,000 barrels of clams were canned, and about 2,000 barrels were used by the fishermen for bait purposes in the codfishery during the summer months when there was a scarcity of herring on the coast.

PROVINCE OF QUEBEC.

GRAND RIVER, GASPÉ.

Reporter, Mrs. John Carbery.

The following report of the fisheries at this station is the result of information obtained by our reporter from the agents of the large fishing establishments of Chas. part of the season, which prevented boats from going out on the grounds and also to Robin Collas & Co., Ltd., and John Sealy's.

Codfish.—The codfishery in many places on the Gaspé coast the past season has not been up to the average, attributed, more or less, to rough weather towards the latter part of the season which prevented boats from going out on the grounds, and also to the never failing visit of the dogfish in the months of July and August. This fishery in these parts is chiefly prosecuted on the banks, forty miles distant in open boats about 28 feet long. These boats with three men on board leave shore on Monday and drift with nets for herring bait in shore and on the banks. If successful, and codfish are in fair quantities the boatmen will return in three or four days with 30 and 40 cwt. of fish which is considered a good catch. In some instances when fish and bait are plentiful, as much as 80 cwt. is landed, but very often the fishermen may be out all the week obtaining very little bait with fish scarce when they will return to port the latter part of the week, Saturday as a rule, with ten to twelve quintals of fish, some of which is a very inferior quality as the fish is not now split or salted before it comes ashore and the only thing done towards preserving it is the taking out of the entrails and liver, which are thrown overboard. A few Nova Scotia and American vessels visited this station during the season, often making good catches with bait kept on ice secured at other localities. Our inshore fishery has been very poor this season owing to a scarcity of bait. The catch on the whole is considered a fair one and the prices received were higher than in former years.

Herring which were very plentiful in early spring disappeared gradually during the summer, and have now entirely departed from our waters for the season, notwithstanding the fact that in previous year, at this date (November 10), they were plentiful. The herring fishery on the banks was reported fair during the summer.

Lobsters were very fair in the early spring and commanded a big figure. The total catch was small this season and lobsters are becoming scarcer and smaller in size every year.

4-5 EDWARD VII., A. 1905

Caplin.—There is also a noticeable decrease in the quantities of caplin visiting our shores. Years ago they were very plentiful and would be rolling ashore. This year very few were seen.

Salmon were very scarce at this station the past season, with a small catch reported.

Mackerel were very scarce along this coast the past season.

Squid.—A few of this valuable bait-fish were taken in the month of September.

Dogfish.—The dogfish pest which nearly destroyed the catch last year did interfere very much with the catch this season. This together with rough weather largely attributed to the scarcity of bait along our coast during the season.

Our reporter in concluding, says,—‘I am of the opinion that in most places on this coast, the fishing industry is not decreasing but increasing. In such places as Grand river, Little River East and Newport, indications are for many years to come there will be a large and profitable business in this particular industry ‘The Fisheries.’

L'ANSE AUX GASCONS, QUE.

Reporter, Mrs. A. E. Brotherton :

Caplin.—Good catches of caplin were reported in July, but the fishing on the whole was poor during the season.

Codfishing began about May 31, and to the end of June the catches varied from good to fair and from fair to poor during the month of July. Dogfish and stormy weather greatly interfered with codfishing in August, but the catch in September and to October 14 was on an average fair. It was reported that the total catch the past season will be about one-half that of the previous year, which is attributable to the scarcity of bait during the season that codfish were on the coast.

Herring appeared in fair quantities on May 3, which increased considerably the following day and to May 19, very large quantities of herring were on the coast and good stops were made. Herring bait by fishermen's nets was reported on the 9th, and to June 14, the fishing varied from good to fair. Light quantities of herring were taken the latter part of June and in July, excepting the 1st, 12th, 14th, 15th and 16th, on which days a few fair hauls were made. Dogfish were troublesome in the month of August and herring appeared from fair to poor. Fair fishing was reported in September on the 2nd and 3rd, with small quantities going to the 10th. The herring fishery varied in October from good to fair from the 4th to the 14th.

Lobster operations began fair on May 3 and continued the same to the middle of the month. On May 17 and 24, good lobster fishing was reported with fair again to the end of May. Fair reports were received daily in June excepting the 10th, when the fishery was very good, and light fares after to the close of the season, which has been considered a fair one.

Salmon were reported fair on June 13 and 14, but the fishery was considered very poor the past season.

Squid were first reported on August 12, and fair hauls were made to the 16th, with small quantities being taken to the end of the month. Squid were taken in September for bait from 2nd to 29th in catches from fair to poor.

Although the fisheries at this station the past season have been considered on an average poor, the prices realized were good, which will give the fishermen their usual profitable margin.

SESSIONAL PAPER No. 22

NEWPORT POINT, QUE.

Reporter, Mrs. M. Meunier.

Cod appeared about May 26, fair, and on the 30th and 31st fair codfishing was reported in-shore. The in-shore fishery improved to good on June 1 and 2 and bankers reported from ten to thirty drafts on the 3rd. The fishing continued good to the 17th, increasing to very good on the 18th. From 10 to 25 drafts were reported by bankers on the 10th, and from 10 to 20 drafts on the 24th, with the fishery reported fair on the 21st and 25th. Throughout the month of July the catches were on an average fair with bankers reporting from 10 to 35 drafts on the 9th, and from 15 to 30 drafts on the 16th. Boats were all off to the banks August 1, but dogfish were in charge of the grounds and very little was done in the off-shore fishery during the month. Strong winds were also prevalent and several days 'no fishing' was reported. Fair codfishing was reported on the 3rd, 4th, 10th and 24th and good on the 16th. September 1 cod struck in plentiful and good fishing days were reported on the 6th, 7th and 8th. On the 9th, bankers came in with drafts of cod varying from 10 to 20, and fair quantities were taken on the 12th, with good on the 13th. No fishing, owing to strong winds, was reported to September 28, on which date cod were going in fair quantities. Several fair catches of codfish were made in October and good fishing was reported on the 15th of the month. Nine thousand and forty-eight drafts of fresh cod were reported this season.

Herring struck in in good quantities on May 2 and 3 with very good quantities being reported quite regularly each day to the end of the month. The fishing was on an average fair in June and very light quantities were taken in July. Fair stops of herring were taken in August on the 3rd, with good fares on the 16th and 25th. In September, from the 6th to 12th, the fishing varied from good to poor with bait fair, being reported in-shore on the 28th. The only report received in October indicated good herring fishing on the 15th. About 3,600 barrels of herring were taken during the season.

Lobsters were taken in good catches May 2, 3 and 4, after which the fares averaged up fair for the remainder of the month. To June 21 lobsters were taken in catches varying from good to fair.

Salmon were reported May 26 fair, and in June fair catches were taken on 7th, 9th and 20th.

Squid fishing was reported fair September 1, and bait fair in-shore was reported on September 28.

Caplin appeared on the coast June 7 fair, and on the following day struck in very plentiful, continuing the same to the 24th of the month.

PASPEBIAC, QUE.

Reporter, Miss Ada Beck.

Cod were first caught here on June 3, when a few were taken, but the quantity began increasing until about the 15th of the month, good in-shore fishing was reported with boat averaging three drafts daily. On the 25th, codfish were reported scarce and varied from this condition to fair up to August 15. Bait was now hard to obtain, and clams, which have proved to be very poor bait, were being used in the codfishery. After August 15 both cod and herring became fair then good; and from September 15 to the end of October, fishing in both branches were reported to have been very favourable indeed to the fishermen. A great trade is now being carried on

4-5 EDWARD VII., A. 1905

at this station with the skinless and boneless cod, which is first on the market; the most part of the codfish taken in this locality is being preserved in this manner.

Herring.—The first fish which visited our shores this spring were the herring, which came along about April 27. At first they were reported scarce; but the quantity gradually increased and became very abundant to May 11. As high as sixty barrels were taken in seines; then they were reported scarce after the end of June, when the herring left our shores. A reappearance of herring in large quantities was noticed about August 15, which remained the same to the end of the season.

Lobsters.—The first report of lobsters was received on April 3, indicating fair catches, which continued throughout the season. When bait was obtainable lobster-traps were supplied to the last of June, about which time lobsters themselves became scarce and the fishermen hauled in their traps and gear for the season. For the past twelve years lobster-fishing at this station has had no part in the fishing business; but last spring the trade was attempted and the results have been sufficient to encourage the same industry next year.

Caplin appeared on the coast about May 23 in large quantities; after which fair catches were made during the week, when the fish left our shores and no more were seen during the remainder of the season.

Smelts.—About August 8, smelts were taken in good numbers. Some were used as bait for cod and a portion of the catch was retailed fresh. A good quantity of smelts was reported wasted or thrown away—there being no trade for this fish at this station.

A new industry was started in our locality this season. The oil plant for the manufacturing of cod livers into oil. By aid of a stream apparatus cod-livers are being converted into refined cod liver oil. The industry proved fair this, its first season, and promoters entertain better success next year.

PERCÉ, QUE.

Reporter, Mr. E. G. Tuzo :

Caplin were not taken at his station during the past season.

Cod were first reported when a few were taken on May 28, and it was reported codfish were fairly plenty throughout the season, but the fishing was unfortunately hampered for want of bait.

Herring.—Light quantities of herring were taken in May on the 3rd, 4th and 5th, with fair stops being made on the 13th and 14th, when herring struck in very plentifully. To the end of May the herring fishery varied from very good to poor. Herring during the early spring were fairly plentiful, and scarce the summer months. The fall herring fishery was a total failure.

Lobsters were reported on the coast very plentifully on May 3, and for the remainder of the month the catches were from good to poor. Fair lobster fishing was reported to June 14, with light catches to the 28th. The lobster catch on the whole was considered a poor one this season owing to a scarcity of both fish and bait.

Squid struck in the middle of August and were plentiful until the latter part of September, when it suddenly left the shores.

Dogfish were reported on the coast and very troublesome on August 24.

The conditions at this station the past season were in every respect favourable for a good catch and a good season for all those in the fish trade had there been bait, as storms were less frequent and the weather well suited for the curing of fish.

SESSIONAL PAPER No. 22

PT. ST. PETER, QUE.

Reporter, Mrs. M. J. Bond.

Codfish were very late in appearing this season, and were first reported the latter part of May, when one boat made a catch of three fish. Fair fishing was reported on June 1, 2 and 3, and the highest boat fishing in-shore secured ten drafts of fish. Cod appeared very plentiful on the 6th, 7th and 8th and to the end of June were taken in catches varying from very good to fair, with one banker on the 24th reporting for nine drafts. Very good quantities of cod were on the coast the first week of July and good catches were taken to the 18th and fair to the 30th. 15 drafts was the highest bank catch reported in July, 13 drafts on the 3rd, 20 drafts on the 7th, and 14 drafts on the 20th, were the best catches in the bank fishery during the month of August, although, dogfish were on the coast in very large numbers. The in-shore fishing in September was fairly good at intervals and several boats reported in with large hauls. High winds and strong tides which prevailed during October prevented successful fishing, 4,000 drafts of cod, or 1,000 drafts better than last year is the estimated catch in the cod-fishery for the past season.

Caplin were taken in very good catches on May 22, 24 and 27, and again in July on the 1st, 6th and 7th. The fish were reported July 2, used to bait along with herring.

Herring struck in early in May very plentifully and to the 14th some good stops were made. As the weather was occasionally disagreeable the fishing varied to fair for the remainder of the month. Several good catches of herring were taken in June and fair stops were reported by drifting in July. Bank herring were reported fair on August 3, and on the 7th, one boat made a catch of three barrels. Dogfish caused a suspension of the fishing during the middle of August and herring were scarce after to the end of the month, excepting the 25th when a fair stop was made by drifting. Later in the season, the weather was very unfavourable for fishing, and the total catch is estimated at 100 barrels or about the same as last year's.

Lobsters.—The first catch of lobsters reported this year was on May 3, when fair catches were made each day until the 14th, with the exception on the 13th, when very good fishing was reported. From the 16th to 22nd, lobsters were scarce and on the 23rd, 25th and 26th the fishery was reported very good, and fair on the 24th and 30th. The June catch to the 27th, varied from fair to poor and to the close of the season fair catches were reported when the weather permitted. Several stormy periods attended the lobster fishery this year with the result that about 350 cases less were packed this season than in the previous year, there having been put up in this district in 1903, 500 cases.

Salmon were taken in fair catches in June from the 3rd to 27th with good fishing on the 24th. In July, salmon were reported fair on the 6th and 7th and scarce on the 11th and 12th.

Squid were first reported when one boatman during the last week in July reported a catch of eight squid in his net. Fair quantities were taken in August on the 11th, 12th, 13th, 19th and 25th with very good catches on the 18th. Squid struck in-shore in September in very large quantities on the 6th and 7th with good fishing reported on the 23rd. Boats engaged in squid fishing during the season averaged seven barrels per ton.

Trout fishing was reported fair on August 5.

4-5 EDWARD VII., A. 1905

STE. ADELAIDE DE PABOS, QUE.

*Reporter, Mrs. A. Lemarquand :**Caplin.*—Very few caplin were reported the past season at this station.

Cod fishing commenced at this station the latter part of May and fair hauls were taken on the 30th and 31st. Cod very plentiful were reported the first week in June with boats averaging on the banks from 10 to 30 drafts and the inshore fishery from 3 to 8 drafts. There was a scarcity of fish on the off-shore grounds on the 15th, but from good to fair hauls were being made close inshore which continued to the 30th, when bankers arriving reported from 15 to 25 drafts. Cod were very scarce early in July owing to rough weather, but the off-shore fishermen reported from 30 to 33 drafts on the 9th. From July 13 to 28 scarcity of bait rendered the inshore fishery again dull while those operating off-shore had from 15 to 30 drafts. Although cod were on the coast in August, in quantities varying from good to poor, it was reported that the fishing was not very favourable owing to bait being very scarce and the inshore fleet was seriously hampered by shoals of dogfish. Notwithstanding the roughness of the weather the first part of September the few boats that were operating the fisheries for a few days did fairly well. By the weekly report of September 3, 15 boats abandoned fishing for the season. The week ending September 17 was very rough, one boat was lost on Thursday the 15th, and the crew of three men was drowned. Towards the close of the season, cod were very scarce with the weather rough and only very few vessels were operating. It was reported the cod fishery was the poorest at this station, this season, for many years past.

Herring struck in good quantities on May 2, and continued the same to the 6th, when the catches became light to the 9th. From this date to the 20th, owing to stormy weather herring were taken in catches from good to poor. Fair herring fishing was reported to June 10 with very small stops a little later on in the month of June and early in July. An occasional fair haul of herring was made during August and the first week in September. Herring were scarce after to the close of the season.

Lobsters appeared plentifully on May 2 with good catches the following day. Strong breezes were reported the 5th which caused lobsters fares to be very light. From May 9 to 31 when the weather permitted the catches varied from good to poor. The June catch opened light, but increased to good, afterwards becoming fair to poor for the balance of the season.

Salmon fishing began May 30, with good catches continuing the same to June 15. Fair fishing was next reported to June 25, after which the fishery became dull to the close of the fishing season.

Squid appeared on the coast in July on the 25th in fair quantities and were caught in August from the 16th to 20th, in catches varying from good to poor. A few catches of squid were also taken in September from the 7th to 23rd.

Smelts.—Boats were reported on October 1, doing very well in the smelt fishing, and on October 5, 7 and 12, very large quantities of smelts were going with fair fishing on the 14th.

GRINDSTONE, MAGDALEN ISLANDS, QUE.

Reporter, Mr. J. A. Lebourdais.

Cod.—The first report received from this station was by letter, dated May 4, stating that the Meat cove cable to these islands was interrupted and no daily reports could be forwarded until repairs were made to the damaged cable. Ice was

SESSIONAL PAPER No. 22

then around the islands in many places and the only fish going was herring, which were fairly abundant. Cod appeared in light quantities about the middle of May, which increased to larger numbers to the end of June, with a scarcity of bait reported. The fish moved wide off-shore in July and the fishing was reported fair when bait was obtainable. On August 8 codfishing was very poor, owing to the severity of the weather, in fact, fishing in all branches of the fisheries had been suspended during the week. Very light fares were taken to August 29, when some fishing vessels operating for a few days on the south part of the islands reported good fishing. The weather the first week in September was very stormy, which prevented the fishermen from visiting the fishing grounds. Very little fishing was done the latter part of September and on October 10, it was reported that a few boats would venture forth when the weather was fine, but the fishing in general was gradually diminishing in catch to the end of the season.

Herring struck in plenty on April 25 and continued on the coast in large quantities to the latter part of May. A large fleet of banking vessels was successful in obtaining bait at these islands on May 17, but ice on the coast forced the fishermen to raise their traps, which were found to be full of herring. Some nets were again set after the disappearance of the ice at Amherst island and the south side of the bay with fairly good success. Herring, which were plentiful within a few days of May 31, were becoming scarce in some localities with the weather stormy and changeable. In the Pleasant bay district herring were getting scarce, while large quantities were still in traps at Grand Etang to June 22. From this period to the close of the season none were reported.

Lobster.—Fishermen got their gear out on April 28, when lobsters were on the coast in fair quantities, but ice which was still on the coast greatly damaged a large quantity of traps and prevented fishing operations in general to the middle of May. After the ice had left the shores lobstering was very good all around the islands until June 18. The report of June 6 stated that lobsters were very plentiful in some localities, principally the south-east and north-east to north part of the islands and that this fish had not been seen so abundant for many years past. In fact, the catch at times was so large that the packers did not have a sufficient quantity of cans on hand to meet their requirements. The extension of time granted to the lobster fishermen this fall was only attended with fair results.

Mackerel were first taken about these islands the past season, the first week in June by netters, who reported a few taken with good prospects. Some boatmen did fairly well in the mackerel fishery on Saturday the 11th, while other fishermen reported doing nothing at all. On July 4, the spring run of mackerel by nets was a complete failure and boats with twenty and twenty-five nets attached to them secured only one half barrel. Mackerel hooking began on the north-east section of the islands the latter part of July with poor catches and prospects not very encouraging. There was very little doing in the mackerel fishery to August 18, on which date and on the 19th and 25th, a slight improvement was noticed, with fair catches reported. A good run of mackerel was also going on the 23rd, and one or two boats stopped from 300 to 500 fish. The prospects now had the weather continued favourable, were very good. A few small fares of fish were taken late in the season, but as the weather in October was becoming rather too rough for small boat fishing, and fish were getting very scarce all around the islands a number of fishermen who considered themselves not properly prepared for the severity of the prevailing weather, decided to abandon the fisheries for the season.

I have the honour to be, sir,

Your obedient servant,

A. D. MACKERROW,
Clerk in charge, F. I. Bureau.

